

NASDA's Farm Policy Initiative: Farm Income Safety Net

Examples of How Counter Cyclical and Fixed Payments Would Be Determined

Guiding Principles	
•	Safety Net is equal to 90% of total cost of production, of which <ul style="list-style-type: none"> – 10% will be a fixed payment (base acres and yields) – 90% will be a counter cyclical variable (actual production)
•	Based on national average economic cost of production (1998 – 1999)
•	Fixed payment based on updated base acres and yields (5 year average 1996 – 2000)
•	Complements cost of production insurance

Commodity	National Average Total Cost of Production (1998 – 1999)	Safety Net 90% Cost of Production	Safety Net 90% Cost of Production	
			Fixed (Base Acres and Yield) 10%	Counter cyclical Variable (Actual production) 90%
Barley/bu	\$3.52	\$3.17	\$0.32	\$2.85
Corn/bu	\$2.66	\$2.39	\$0.24	\$2.15
Cotton/lb	\$0.90	\$0.81	\$0.08	\$0.73
Oats/bu	\$2.36	\$2.12	\$0.21	\$1.91
Rice/cwt	\$11.74	\$10.57	\$1.06	\$9.51
Sorghum/bu	\$3.61	\$3.25	\$0.33	\$2.92
Soybeans/bu	\$5.99	\$5.39	\$0.54	\$4.85
Wheat/bu	\$4.22	\$3.80	\$0.38	\$3.42

Source – USDA-ERS

Scenario #1

Base corn farmer who now plants sorghum

No Cost of Production Insurance

Commodity	Acres	Yield	Market Price (Actual)	Loan Rate (Actual)
Corn (base)	600 (base)	130 bu (base)	NA	NA
Sorghum (actual)	450 (actual)	85 bu (actual)	\$2.00	\$1.81

1. Determine fixed and variable payments for base and actual crops.

Commodity Actual and Base	National Average Total Cost of Production (1998 – 1999)	Safety Net 90% Cost of Production	Safety Net 90% Cost of Production	
			Fixed 10%	Counter cyclical (CC) Variable 90%
Corn/bu	\$2.66	\$2.39	\$0.24	NA
Sorghum/bu	\$3.61	\$3.25	NA	\$2.92

(national average total cost of production)(90%) = safety net

(safety net)(10%) = fixed

(safety net)(90%) = variable

2. Calculate Counter cyclical payment for actual crop (sorghum)

Actual Commodity	CC Variable 90%	Actual Market Price	CC Variable Payment Rate	Actual Yield	Actual Acres	CC Payment
Sorghum	\$2.92	2.00	\$.92	85 bu	450	\$35,190

(CC variable) – (market price) = CC variable payment rate

(CC variable rate)(actual yield)(actual acres) = CC payment

3. Calculate fixed payment for base commodity (corn)

Base Commodity	Fixed 10%	Actual Market Price	Base Yield	Base Acres	Fixed Payment
Corn	\$.24	NA	130 bu	600	\$18,720

(fixed rate)(base yield)(base acres) = fixed payment

4. Total payments

Fixed Payment	\$18,720
Counter cyclical Payment	\$35,190
TOTAL PAYMENT	53,910

(fixed payment) + (counter cyclical payment) = total payments

Scenario # 2

Base wheat farmer still planting wheat

No cost of production insurance

Commodity	Acres	Yield	Market Price (Actual)	Loan Rate (Actual)
Wheat (base)	1200 (base)	50 bu (base)	NA	NA
Wheat (actual)	1000 (actual)	45 bu (actual)	\$2.70	\$2.58

1. Determine fixed and variable payments for base and actual crops.

Commodity Actual and Base	National Average Total Cost of Production (1998 – 1999)	Safety Net 90% Cost of Production	Safety Net 90% Cost of Production	
			Fixed 10%	Counter cyclical (CC) Variable 90%
Wheat/bu	\$4.22	\$3.80	\$0.38	\$3.42

2. Calculate counter cyclical (CC) payment for actual crop

Actual Commodity	CC Variable 90%	Actual Market Price	CC Variable Payment Rate	Actual Yield	Actual Acres	CC Payment
Wheat	\$3.42	2.70	\$.72	45 bu	1000	\$32,400

$$(\text{CC variable}) - (\text{market price}) = \text{CC variable payment rate}$$

$$(\text{CC variable rate})(\text{actual yield})(\text{actual acres}) = \text{CC payment}$$

3. Calculate fixed payment for base crop

Base Commodity	Fixed 10%	Actual Market Price	Base Yield	Base Acres	Fixed Payment
Wheat	\$.38	NA	50 bu	1200	\$22,800

$$(\text{fixed rate})(\text{base yield})(\text{base acres}) = \text{fixed payment}$$

4. Total payments

Fixed Payment	\$22,800
Counter cyclical Payment	\$32,400
TOTAL PAYMENT	\$55,200

(fixed payment) + (counter cyclical payment) = total payments

Scenario # 3 (Builds on #2)

Base wheat farmer still planting wheat

Buys cost of production insurance at 90%
(new variable needed - cost of production per acre)

Commodity	Acres	Yield	Market Price (Actual)	Loan Rate (Actual)	Cost of Production/acre
Wheat (base)	1200 (base)	50 bu (base)	NA	NA	NA
Wheat (actual)	1000 (actual)	45 bu (actual)	\$2.70	\$2.58	\$182

4. Determine total income from sale of commodity and government payments

Commodity	Acres	Yield	Market Price (Actual)	Sale of Commodity	Government Payment	Total Income
Wheat (actual)	1000 (actual)	45 bu (actual)	\$2.70	\$121,500	\$55,200	\$176,700

(acres)(yield)(market price) = sale of commodity

(sale of commodity) + (government payment) = total income

5. Calculate total expense

Cost of Production/Acre	Acres (actual)	Total Expenses	Insurance Coverage Level (90%)	Total Income	Indemnity
\$182	1000	\$182,000	\$163,800	\$176,700	none

(cost of production/acre)(acres) = total expenses

(total income) – (insurance coverage level) = indemnity

6. In this example, the farm receives no indemnity because his total income exceeded his insurance level coverage, but he still took a \$5,300 loss because his total expenses were more than his total income.

Scenario # 4 (Builds on #2)

Base wheat farmer still planting wheat

Buys cost of production insurance at 90%
Expenses increase

Commodity	Acres	Yield	Market Price (Actual)	Loan Rate (Actual)	Cost of Production/acre
Wheat (base)	1200 (base)	50 bu (base)	NA	NA	NA
Wheat (actual)	1000 (actual)	45 bu (actual)	\$2.70	\$2.58	\$200

4. Determine total income from sale of commodity and government payments

Commodity	Acres	Yield	Market Price (Actual)	Sale of Commodity	Government Payment	Total Income
Wheat (actual)	1000 (actual)	45 bu (actual)	\$2.70	\$121,500	\$55,200	\$176,700

$(\text{acres})(\text{yield})(\text{market price}) = \text{sale of commodity}$

$(\text{sale of commodity}) + (\text{government payment}) = \text{total income}$

5. Calculate total expense

Cost of Production/Acre	Acres (actual)	Total Expenses	Insurance Coverage Level (90%)	Total Income	Indemnity
\$200	1000	\$200,000	\$180,000	\$176,700	\$3,300

$(\text{cost of production/acre})(\text{acres}) = \text{total expenses}$

$(\text{total income}) - (\text{insurance coverage level}) = \text{indemnity}$

6. In this example, the farmer receives an indemnity of \$3,300, but he still sustained a loss of \$20,000 (10%).

Scenario # 5 (Builds on #2)

Base wheat farmer still planting wheat

Buys cost of production insurance at 90%

Expenses decrease

Commodity	Acres	Yield	Market Price (Actual)	Loan Rate (Actual)	Cost of Production/ acre
Wheat (base)	1200 (base)	50 bu (base)	NA	NA	NA
Wheat (actual)	1000 (actual)	45 bu (actual)	\$2.70	\$2.58	\$175

4. Determine total income from sale of commodity and government payments

Commodity	Acres	Yield	Market Price (Actual)	Sale of Commodity	Government Payment	Total Income
Wheat (actual)	1000 (actual)	45 bu (actual)	\$2.70	\$121,500	\$55,200	\$176,700

$(\text{acres})(\text{yield})(\text{market price}) = \text{sale of commodity}$

$(\text{sale of commodity}) + (\text{government payment}) = \text{total income}$

5. Calculate total expense

Cost of Production/Acre	Acres (actual)	Total Expenses	Insurance Coverage Level (90%)	Total Income	Indemnity
\$175	1000	\$175,000	\$157,500	\$176,700	none

$(\text{cost of production/acre})(\text{acres}) = \text{total expenses}$

$(\text{total income}) - (\text{insurance coverage level}) = \text{indemnity}$

6. In this example, the farmer clears \$1,700 by keeping his cost of production down.

Scenario # 6

Base wheat farmer still planting wheat

Experiences a yield loss from 45 bu to 20 bu
Buys cost production insurance at 90%

Commodity	Acres	Yield	Market Price (Actual)	Loan Rate (Actual)	Cost of Production/acre
Wheat (base)	1200 (base)	50 bu (base)	NA	NA	NA
Wheat (actual)	1000 (actual)	20 bu (actual)	\$2.70	\$2.58	\$182

1. Determine fixed and variable payments for base and actual crops.

Commodity Actual and Base	National Average Total Cost of Production (1998 – 1999)	Safety Net 90% Cost of Production	Safety Net 90% Cost of Production	
			Fixed 10%	Counter cyclical (CC) Variable 90%
Wheat/bu	\$4.22	\$3.80	\$0.38	\$3.42

2. Calculate counter cyclical (CC) payment for actual crop

Actual Commodity	CC Variable 90%	Actual Market Price	CC Variable Payment Rate	Actual Yield	Actual Acres	CC Payment
Wheat	\$3.42	2.70	\$.72	20 bu	1000	\$14,400

$(\text{CC variable}) - (\text{market price}) = \text{CC variable payment rate}$

$(\text{CC variable rate})(\text{actual yield})(\text{actual acres}) = \text{CC payment}$

3. Calculate fixed payment for base crop

Base Commodity	Fixed 10%	Actual Market Price	Base Yield	Base Acres	Fixed Payment
Wheat	\$.38	NA	50 bu	1200	\$22,800

$(\text{fixed rate})(\text{base yield})(\text{base acres}) = \text{fixed payment}$

4. Total payments

Fixed Payment	\$22,800
Counter cyclical Payment	\$14,400
TOTAL PAYMENT	\$37,200

(fixed payment) + (counter cyclical payment) = total payments

5. Determine total income from sale of commodity and government payments

Commodity	Acres	Yield	Market Price (Actual)	Sale of Commodity	Government Payment	Total Income
Wheat (actual)	1000 (actual)	20 bu (actual)	\$2.70	\$54,000	\$37,200	\$91,200

(acres)(yield)(market price) = sale of commodity

(sale of commodity) + (government payment) = total income

6. Calculate total expense

Cost of Production/Acre	Acres (actual)	Total Expenses	Insurance Coverage Level (90%)	Total Income	Indemnity
\$182	1000	\$182,000	\$163,800	\$91,200	\$72,600

(cost of production/acre)(acres) = total expenses

(total income) – (insurance coverage level) = indemnity

7. In this example, the farmers' cost of production insurance combined with the fixed and counter cyclical payment provide a safety net of 90% of his cost of production. His loss is \$18,200. If he had not purchased cost of production insurance, his loss would have been \$90,800. With government payments combined with crop insurance, the producer is guaranteed ninety percent of his cost of production under most scenarios.