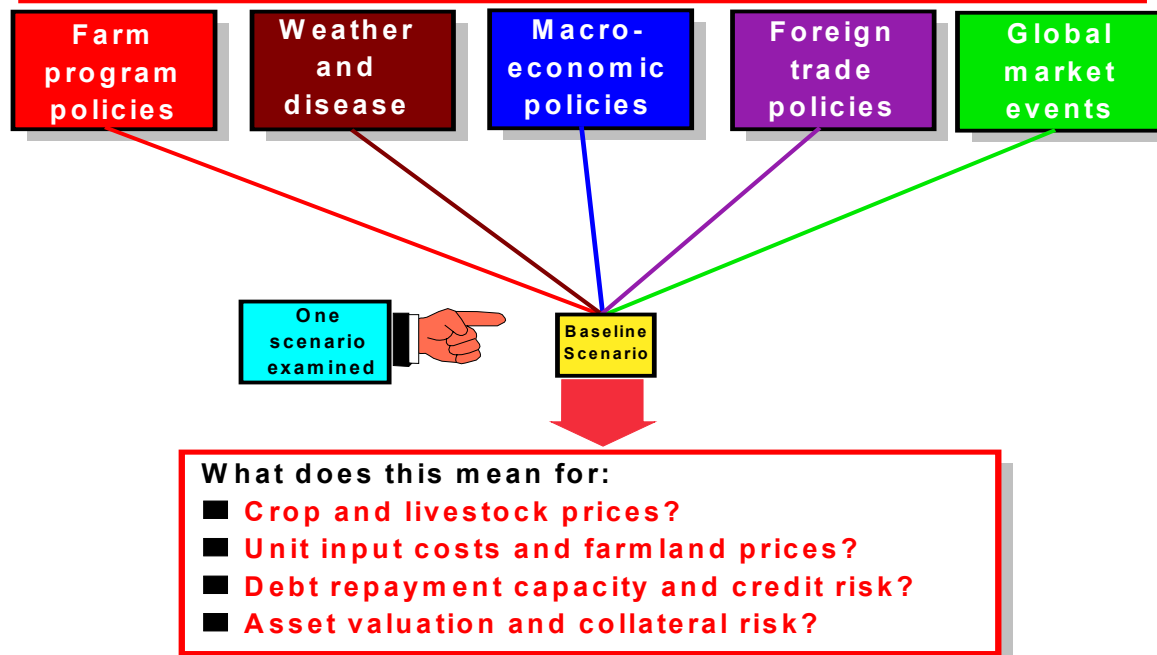


NATMOD  
Econometric Model  
Farm Policy Analysis

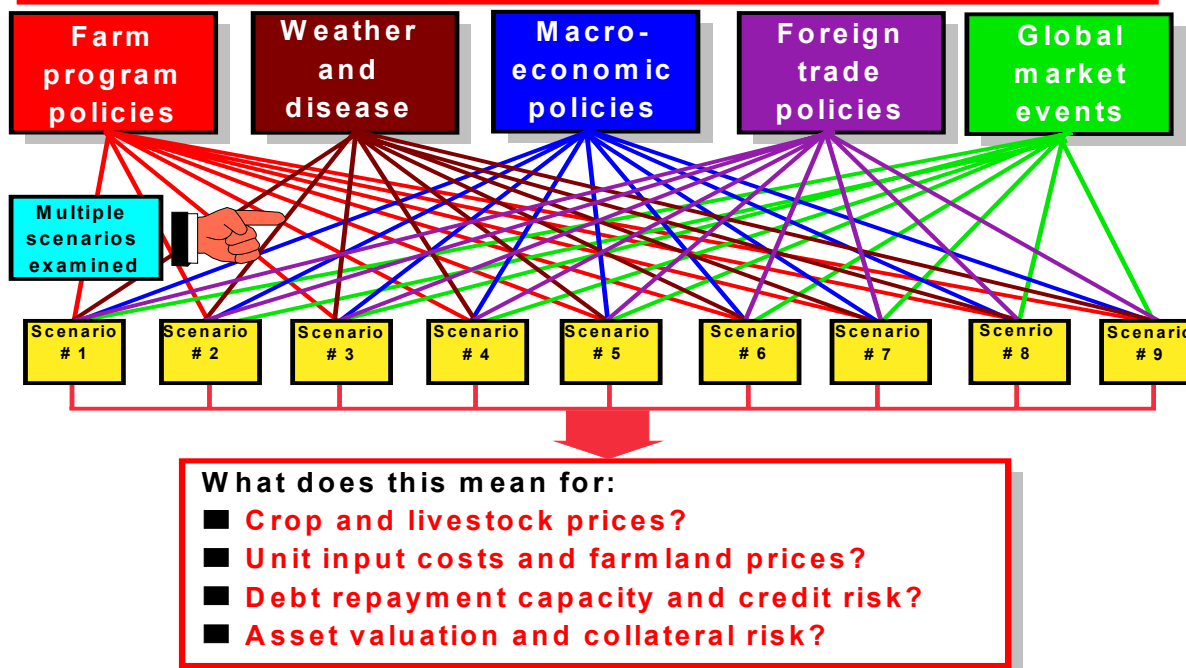
Typical policy analysis makes the assumption of one alternative scenario from each of the boxes shown in the following chart. This analysis implicitly assumes perfect knowledge of future events occurring in each of these boxes. This methodology is prone to potentially huge errors due resulting from the wide variety of prospective events that can occur in the future.

## Structural Pro Forma Analysis



Conversely, our approach, assumes we do not have perfect knowledge of these events. Given our fully simultaneous state-of-the-art modeling approach, we are able to run multiple scenarios in a structured and timely fashion. This approach takes potential likely and actual scenarios from each of the boxes and allows the client to look at their proposal from multiples angles.

## Structural Pro Forma Analysis



The major factor that makes AgriLogic, Inc. unique in the marketplace is our large-scale econometric models.

These models:

- ❖ Project future trends in supply and demand
- ❖ Commodity prices
- ❖ Input costs
- ❖ Operating margin spreads
- ❖ Farmland values at the national and regional levels

**National Macro  
Econometric  
Projections**

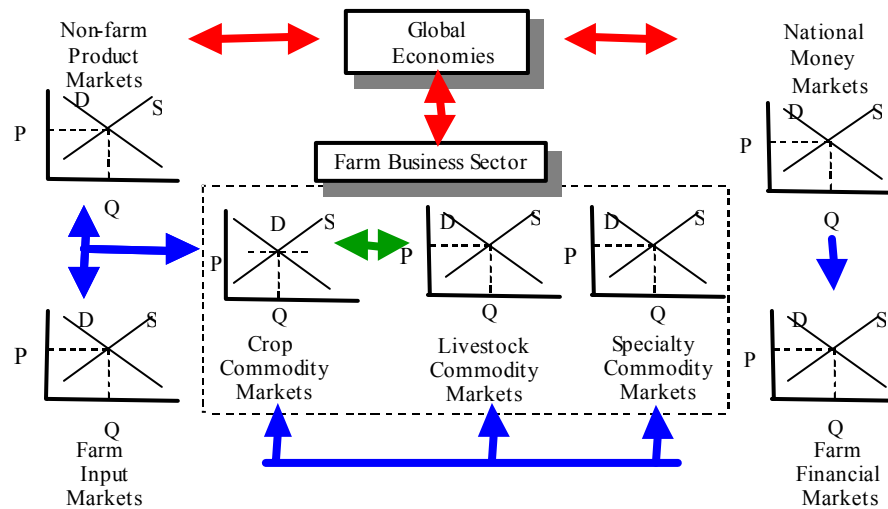
**State Level  
Projected  
Economic Activity**

**County Level  
Projected Economic  
Activity**

3-digit SIC Industry Performance  
3-digit SIC Wages and Salaries  
Other Key Economic Indicators

The principle value of these econometric models to our clientele is the ability to assess how specific market conditions and policy events in Washington and around the globe will affect production, prices, and government outlay. The simultaneous econometric models forecast the effects at the national, state, regional, county, and individual producer level.

This figure summarizes the major relationships in our econometric models. The green arrow identifies the interrelationships between the crop and livestock commodity markets. Both sectors borrow capital from farm financial markets, which are influenced by trends in national money markets and global economic activity. Farm inputs suppliers provide fixed and variable inputs to farmers and are also influenced by the non-farm product developments that affect input prices in our econometric models.



Our econometric models project future trends for over 150 crop and 40 livestock products and account for changes in farm program policy, macro-economic policy, foreign trade, weather, and disease. These models have full simultaneity between the crop and livestock sectors allowing for feedback between the two sectors. In addition, the model fully accounts for supply and demand in the agriculture input sector. No other company has this modeling capability; not for agriculture, not for agricultural-related sectors, and not for the non-farm business sectors in the economy.

## Major Crops

### Row Crops

Corn	Wheat
Sorghum	Soybeans
Barley	Cotton
Oats	Rice

### Major Livestock Commodities

Beef Cattle	Sheep
Dairy Cattle	Goats
Broilers	Wool
Layers	Mohair
Turkey - (Polks)	

### Other Grains and Grasses for Seed

Rapeseed	Orchard Grass
Kentucky Blue Grass	Rye Grass
Red Fescue	Perennial Rye Grass
Bent Grass	Red Clover

### Hay

Alfalfa
Other Hay

## Specialty Crops

### Vegetables

Artichoke	Lettuce
Asparagus	Lima beans
Avacado	Mustard seed
Bell pepper	Olives
Broccoli	Onions
Brussel sprouts	Potatoes
Cabbage	Pumpkin
Canola	Rye
Carrots	Safflower
Cauliflower	Sesame
Celery	Squash
Chili pepper	Snap beans
Coffee	Sunflower
Cucumbers	Spinach
Dry edible beans	Sugar beets
Eggplant	Sugar cane
Escarole	Sweet corn
Flaxseed	Sweet potatoes
Garlic	Taro
Green peas	Tobacco
Hops	Tomatoes

### Fruits

Apples
Apricots
Bananas
Blackberries
Blueberries
Boysenberries
Cantalope
Cherries
Cranberries
Dates
Figs
Grapefruit
Grapes/Wine
Honeydew melons
Kiwi
Lemons
Limes

Loganberries
Nectarines
Oranges
Papaya
Peaches
Pears
Peppermint
Pineapple
Plums
Prunes
Raspberries
Spearmint
Strawberries
Tangelos
Tangerines
Temples
Watermelon

### Fish

Pink salmon
Chinook salmon
Sockeye salmon
Coho salmon
Chum salmon
Pacific oysters
Walleye pollock
Clam
Pacific cod
Lake trout
Greenland halibut
Pacific halibut

### Hawaiian Specialty Crops

Banana	Papaya
Coffee	Pineapple

### Tree Nuts

Almonds
Hazelnuts
Macadamia nuts
Pecans

Peanuts
Pistachios
Walnuts

### Crustaceans

Snow crab
Dungeness crab
King crab
Ocean shrimp

# Example Output of Econometric Model

The following table and graphs are example shocks applied to AgriLogic, Inc.'s econometric model. The particular shock applied to this example is a yield shock that can be applied to all crops upon request. The table illustrates data through 2009, but can be forecasted further if requested.

## Major Crops Supply/Use

	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Com</b>									
Production (mil. bu.)	9,508.2	10,486.9	10,538.3	7,404.9	10,570.5	10,494.2	9,652.3	11,982.6	9,049.6
Acres planted (mil. acres)	75.8	79.2	79.0	79.1	81.9	79.6	79.8	81.6	80.3
Acres harvested (mil. acres)	68.8	72.8	72.8	72.9	75.7	73.7	74.0	75.7	74.6
Yield per harvested acre	138.2	144.0	144.7	101.5	139.6	142.4	130.5	158.2	121.2
Supply:									
Beginning stocks (mil. bu.)	1,898.7	1,592.5	1,857.6	2,151.6	905.0	1,564.6	1,973.3	1,459.6	2,983.4
Production (mil. bu.)	9,508.2	10,486.9	10,538.3	7,404.9	10,570.5	10,494.2	9,652.3	11,982.6	9,049.6
<b>Total supply</b>	<b>11,406.9</b>	<b>12,079.4</b>	<b>12,395.9</b>	<b>9,556.5</b>	<b>11,475.5</b>	<b>12,058.7</b>	<b>11,625.6</b>	<b>13,442.3</b>	<b>12,033.0</b>
Disappearance:									
Food and other non feed uses (mil. bu.)	1,776.9	1,715.0	1,811.0	2,259.0	2,212.2	2,232.0	2,312.3	2,250.7	2,439.6
Feed use (mil. bu.)	5,558.8	5,844.2	5,601.0	4,615.5	5,579.3	5,489.5	5,739.6	5,725.5	5,740.3
<b>Total domestic use</b>	<b>7,335.6</b>	<b>7,559.2</b>	<b>7,412.0</b>	<b>6,874.5</b>	<b>7,791.4</b>	<b>7,721.5</b>	<b>8,051.9</b>	<b>7,976.2</b>	<b>8,179.9</b>
Net exports (mil. bu.)	1,876.8	1,968.3	2,068.4	1,432.7	1,669.7	1,845.7	1,665.8	1,870.4	1,828.1
Ending total stocks (mil. bu.)	1,592.5	1,857.6	2,151.6	905.0	1,564.6	1,973.3	1,459.6	2,983.4	1,623.7
<b>Total disappearance</b>	<b>10,804.9</b>	<b>11,385.0</b>	<b>11,632.0</b>	<b>9,212.2</b>	<b>11,025.7</b>	<b>11,540.5</b>	<b>11,177.3</b>	<b>12,830.0</b>	<b>11,631.8</b>
Price of corn (\$/bu.)	\$2.00	\$1.85	\$1.80	\$2.89	\$2.25	\$2.09	\$2.53	\$1.82	\$2.58
Loan rate (\$/bu.)	\$1.89	\$1.89	\$1.89	\$1.89	\$1.89	\$1.89	\$1.89	\$1.89	\$1.89
<b>Stock-to-Use ratio</b>	<b>17.29%</b>	<b>19.50%</b>	<b>22.69%</b>	<b>10.89%</b>	<b>16.54%</b>	<b>20.63%</b>	<b>15.02%</b>	<b>30.30%</b>	<b>16.22%</b>

The following table illustrates some output from selected specialty crops

## ORANGES

	<i>Units</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
<b>US Fresh Oranges</b>								
Production	mil. pounds	4,671.8	4,647.9	4,624.8	5,002.4	4,503.6	4,622.4	4,705.4
Net Exports	mil. pounds	1,229.1	1,200.8	1,181.7	1,350.4	1,108.0	1,155.2	1,185.6
Consumption	mil. pounds	3,442.7	3,447.1	3,443.1	3,651.9	3,395.5	3,467.1	3,519.8
<i>Fresh Price</i>	<i>\$/box</i>	<i>\$7.81</i>	<i>\$8.10</i>	<i>\$8.30</i>	<i>\$6.56</i>	<i>\$9.06</i>	<i>\$8.57</i>	<i>\$8.26</i>

## AVOCADOS

	<i>Units</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
<b>US Avocados</b>								
Production	MT	188,822.1	188,432.3	185,355.3	182,305.4	180,865.4	180,852.9	185,821.3
Net Exports	MT	-99,753.6	-99,705.2	-100,355.4	-100,937.5	-101,043.9	-100,761.5	-99,199.6
Consumption	MT	288,575.7	288,137.5	285,710.7	283,242.9	281,909.3	281,614.5	285,020.9
<i>All Price</i>	<i>\$/ton</i>	<i>\$1,518.11</i>	<i>\$1,594.87</i>	<i>\$1,640.08</i>	<i>\$1,639.33</i>	<i>\$1,611.65</i>	<i>\$1,586.93</i>	<i>\$1,502.00</i>

	<i>Units</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
<b>Florida Avocados</b>								
Production	1000 bushels	1,149.3	1,015.7	988.0	1,031.3	1,092.6	1,100.1	1,140.4
Acres	1000 acres	5.9	5.8	5.8	6.0	6.3	6.3	6.4
Yield	bushels/acre	194.6	175.7	171.1	171.4	173.3	175.8	178.5
<i>All Price</i>	<i>\$/bu</i>	<i>\$13.53</i>	<i>\$14.89</i>	<i>\$15.70</i>	<i>\$15.90</i>	<i>\$15.88</i>	<i>\$16.19</i>	<i>\$16.00</i>

The following table is an example of custom tables that AgriLogic, Inc. has presented to its customers upon request for specific information.

CCC Net Outlays by Commodity & Function under the 2002 Farm Bill

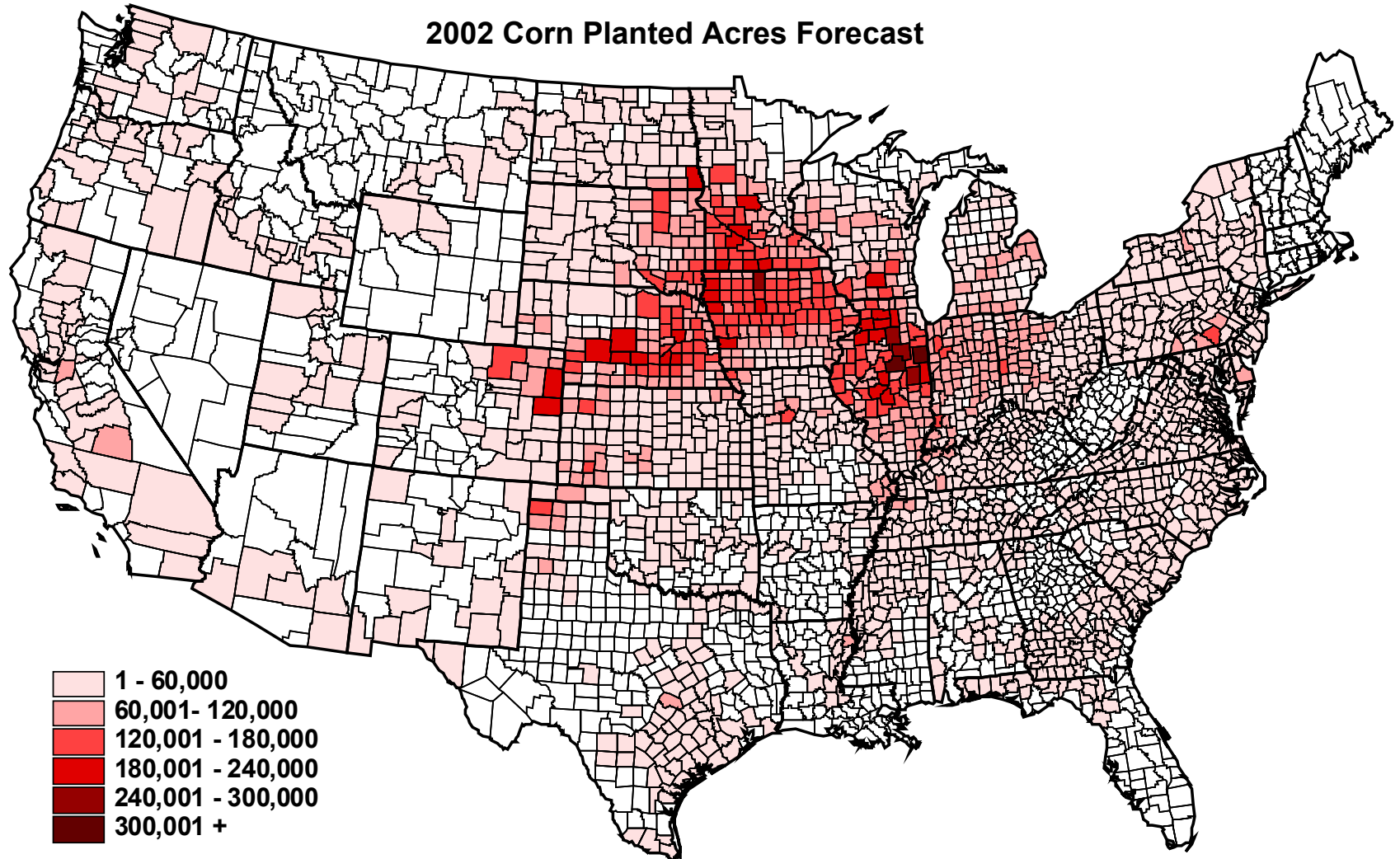
	2003	2004	2005	2006	2007	2008	2009
Feed Grains							
Corn	4,529.8	5,287.8	5,633.0	5,433.0	5,332.9	5,580.8	5,820.2
Grain sorghum	507.8	297.8	290.8	304.6	313.0	349.6	381.7
Barley	172.0	340.6	256.4	277.6	209.6	185.6	191.1
Oats	35.0	41.1	45.3	41.6	39.8	42.7	45.5
<b>Total feed grains</b>	<b>5,244.7</b>	<b>5,967.3</b>	<b>6,225.5</b>	<b>6,056.9</b>	<b>5,895.2</b>	<b>6,158.8</b>	<b>6,438.4</b>
Wheat and products	1,698.3	2,896.1	2,051.2	1,987.8	1,978.5	1,877.8	1,842.1
Rice	732.9	813.6	1,004.8	972.7	978.8	939.8	911.2
Upland cotton	2,535.7	2,548.2	3,075.8	3,319.8	3,433.4	3,461.3	3,346.4
Tobacco	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dairy	123.3	115.2	139.9	0.0	0.0	0.0	26.3
Soybeans	2,813.3	4,748.4	4,041.4	3,302.7	2,363.2	962.6	1,786.9
Peanuts	622.4	608.0	614.4	643.8	401.2	440.5	427.8
Sugar	22.0	23.0	24.0	25.0	26.0	27.0	28.0
Honey	116.1	116.9	111.8	107.9	104.7	103.0	101.2
Wool and mohair	22.7	23.4	24.7	26.5	27.2	30.2	31.0
Operating expense	75.0	75.0	75.0	75.0	75.0	75.0	75.0
Interest expenditure	162.3	178.6	201.9	226.0	250.7	276.3	302.6
Export programs	283.0	239.0	238.0	240.0	289.0	301.0	301.0
1988-2000 Disaster/tree/livestock assistance	120.0	120.0	120.0	120.0	120.0	120.0	120.0
Conservation Reserve Program	2,195.0	2,385.0	2,465.0	2,397.0	2,397.0	2,319.0	2,660.0
Other conservation programs	841.0	1,167.0	1,423.0	1,634.0	1,709.0	1,689.0	1,809.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Specialty Crops	200.0	200.0	200.0	200.0	200.0	200.0	200.0
<b>Total:</b>	<b>17,807.5</b>	<b>22,224.7</b>	<b>22,036.3</b>	<b>21,334.9</b>	<b>20,248.9</b>	<b>18,981.2</b>	<b>20,406.7</b>

# Example Output of Econometric Model

## Total National and State Government Payments under the 2002 Farm Bill

	2003	2004	2005	2006	2007	2008	2009
Alabama	76,385	79,094	78,509	78,294	78,257	76,513	77,701
Alaska	0	0	0	0	0	0	0
Arizona	87,826	92,667	89,921	89,877	89,649	89,271	89,240
Arkansas	582,655	600,675	590,737	590,197	589,781	560,323	576,708
California	382,942	400,344	392,150	391,509	390,945	389,706	389,718
.	.	.	.	.	.	.	.
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South Carolina	62,860	68,145	66,332	66,003	65,896	62,400	64,460
South Dakota	346,126	416,610	397,253	392,321	391,099	353,522	378,185
Tennessee	128,440	139,301	136,569	135,773	135,610	125,938	132,107
Texas	775,818	811,356	790,769	790,738	791,314	791,830	799,265
Utah	9,389	13,058	10,836	10,858	10,636	10,339	10,293
Vermont	0	0	0	0	0	0	0
Virginia	50,270	57,964	55,127	54,768	54,530	50,273	52,830
Washington	132,041	189,072	155,993	154,845	152,623	146,480	145,100
West Virginia	2,200	2,616	2,558	2,520	2,515	2,323	2,471
Wisconsin	207,805	242,038	244,240	240,222	240,075	229,394	241,654
Wyoming	10,532	14,151	12,111	12,153	11,901	11,723	11,747
<b>Total US</b>	<b>2,855,289</b>	<b>3,127,093</b>	<b>3,023,105</b>	<b>3,010,078</b>	<b>3,004,829</b>	<b>2,900,035</b>	<b>2,971,478</b>

# Example Output of Econometric Model



## Example of Scenario:

### **Farm Policy:**

- Change in commodity loan rates
- Various counter-cyclical payment approaches
- Various levels of AMTA payments
- Alternative acreage reduction programs

### **Macro:**

- Soft v. hard landing in U.S. economy
- Alternative monetary and fiscal policy in the U.S. and competitor and client countries
- Various oil price scenarios

### **Weather and Disease:**

- Foot and mouth disease
- BSE implications
- Transposing yield patterns into the future

### **Trade:**

- WTO, NAFTA

Different combinations of these scenarios and others can be run with a one to three day turnaround timeframe.