

# **U.S. Baseline Briefing Book**

## **Projections for Agricultural and Biofuel Markets**

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Prepared by the Integrated Policy Group, Division of Applied Social Sciences

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# Summary

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Larger global crop harvests in 2013 have contributed to a major reversal of fortunes in agricultural markets. Grain prices and crop producer income have dropped sharply, while prices for cattle have reached record levels. Meanwhile, a new farm bill changes the nature of federal support to the farm sector.

These baseline projections for agricultural and biofuel markets were prepared based on market information available in January 2014. Macroeconomic assumptions are based on forecasts by IHS Global Insight and suggest moderate growth in the U.S. and global economies.

The baseline incorporates many key provisions of the Agricultural Act of 2014 (the new farm bill). In several cases the analysis requires important assumptions about how the bill will be implemented and how people will respond to the new options provided. As more information becomes available, these assumptions and estimates will need to be revisited.

The figures reported here represent the average of 500 alternative outcomes based on different assumptions about the weather, oil prices and other factors. In some of the 500 outcomes, prices, quantities and values are much higher or much lower than the reported averages.

Some key results:

- Prices for most crops are likely to remain below recent peaks. Under average market conditions, projected corn prices over the next ten years are about \$4 per bushel and soybeans prices are about \$10 per bushel.
- In 2014, projected corn area planted declines by 4 million acres, while the area devoted to soybeans and several other crops increases. Lower prices discourage production on marginal acres, but more normal weather conditions this spring may allow some land that could not be planted in 2013 to return to crop production.
- The current policy baseline assumes that the Environmental Protection Agency (EPA) proposal to modify the 2014 Renewable Fuel Standard (RFS) will be adopted and that a similar approach will be used to set biofuel use mandates in subsequent years. Projected growth in ethanol production over the next several years is limited.
- Reduced cattle numbers, caused in part by multiple years of drought, limit beef production in 2014 and result in record cattle prices. Cattle prices and returns to cow-calf operators are likely to remain high until herds have a chance to rebuild, which will take time.
- Lower projected feed costs help improve the profitability of livestock production. One uncertainty is the effect of porcine epidemic diarrhea (PED) virus on the pork sector.
- New farm bill provisions include programs that pay farmers only when crop prices or per-acre revenues are below trigger levels. Unlike the old direct payment program that made constant annual payments, the new programs could make no payments in some years and very large payments to producers in other years.
- On average, the projected cost of major commodity programs under the new farm bill is about \$5 billion per year, and crop insurance costs average a little over \$8 billion per year.
- Net farm income in 2014 is projected to decline by more than \$30 billion (24 percent) from the 2013 record, as sharply lower crop prices and reduced government payments more than offset the impact of strong cattle and milk prices and a slight reduction in production costs.
- Food price inflation was less than expected in 2013. Food prices are projected to increase by 2 percent in 2014.

## Key results

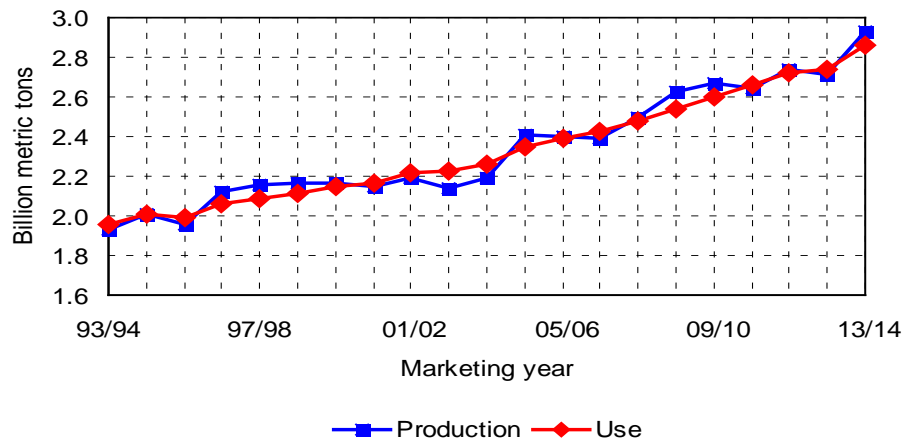
Marketing year	2008/09-2012/13 average	2013/14	2014/15	2015/16-2023/24 average
<b>Crop prices</b>				
Corn farm price, dollars per bushel	5.18	4.42	4.17	4.00
Soybean farm price, dollars per bushel	11.55	12.57	9.84	9.82
Wheat farm price, dollars per bushel	6.47	6.82	5.55	5.27
Upland cotton farm price, cents per pound	70.6	74.2	67.3	66.2
<b>Crop area planted, million acres</b>				
Corn	89.9	95.4	91.3	90.7
Soybeans	76.6	76.5	78.7	76.6
Wheat	57.2	56.2	57.0	56.4
Upland cotton	11.1	10.2	10.5	10.5
12 major crops*	256.0	260.1	259.0	256.2
<hr/>				
Calendar year except as noted	2008-2012 average	2013	2014	2015-2023 average
<b>Livestock sector prices</b>				
Fed steers, 5-area direct, dollars per cwt	101.80	125.89	137.20	126.28
Barrows and gilts, 51-52% lean, dollars per cwt	54.23	64.05	64.25	57.20
National wholesale broiler, cents per pound	81.24	99.70	93.56	91.55
All milk, dollars per cwt	17.31	19.99	20.59	17.86
<b>Biofuel production, billion gallons</b>				
Ethanol	12.1	13.5	14.4	14.8
Corn starch-based ethanol	11.9	13.1	14.1	14.4
Biomass-based diesel	0.7	1.5	1.3	1.5
<b>Government outlays, billion dollars, fiscal year</b>				
Commodity Credit Corporation net outlays	9.5	9.2	8.6	7.5
Major commodity programs	6.0	5.3	5.1	5.1
All other CCC net outlays	3.5	3.9	3.5	2.4
Crop insurance net outlays	5.6	13.8	9.7	8.2
<b>Net farm income, billion dollars</b>	90.8	130.5	99.4	91.3
<b>Annual consumer food price inflation</b>	2.9%	1.4%	2.0%	1.7%

\*Includes corn, soybeans, wheat, upland cotton, sorghum, barley, oats, rice, peanuts, sunflowers, sugarcane and sugar beets.

Note: The estimates are based on market information available in January 2014 and incorporate provisions of the Agricultural Act of 2014, the new farm bill. Projections are averages across 500 outcomes.

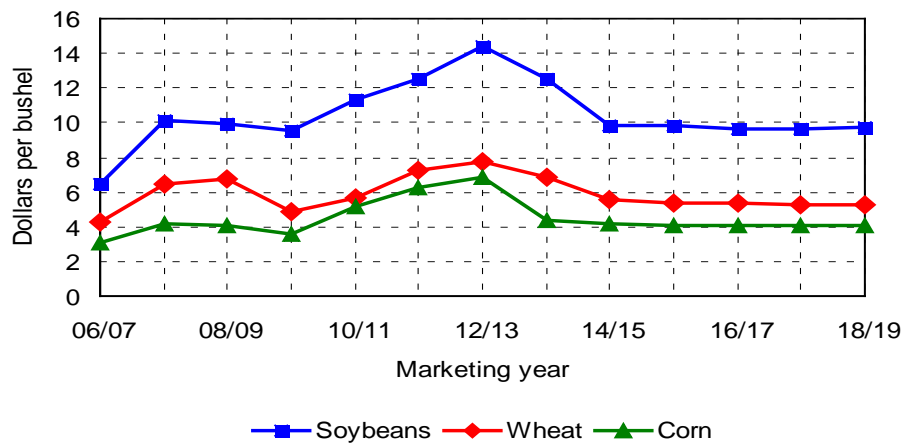
# Lower crop prices and farm income

World grain and oilseed production rebounds



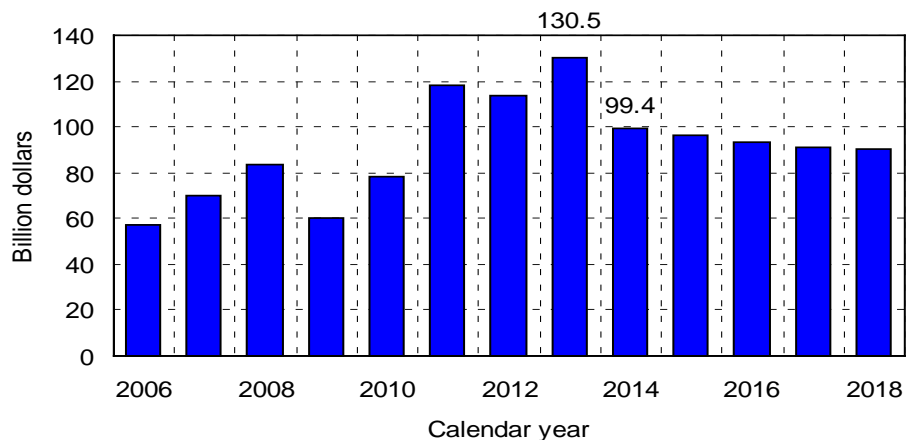
- Rebounding from the 2012 U.S. drought, world production of grains and oilseeds increased sharply in 2013.
- Stocks build as world production exceeds use in the 2013/14 marketing year.
- Since 1993, production of these crops has increased by about 1 billion metric tons, or more than 50 percent.
- Larger global supplies of corn, wheat, soybeans and other crops have been a major factor behind the decline in prices from the record levels of 2012/13.

Crop prices fall back to 2007-2009 levels



- After peaking at \$6.89 per bushel for the drought-reduced crop harvested in 2012, projected corn prices for 2014-2018 average \$4.08 per bushel.
- Soybean prices decline from \$14.40 per bushel in 2012/13 to \$9.76 for 2014-2018.
- Wheat prices drop from \$7.77 per bushel in 2012/13 to \$5.37 for 2014-2018.
- Corn and soybean prices return to very near the 2007-2009 average after four straight years (2010-2013) of below-trend corn yields.

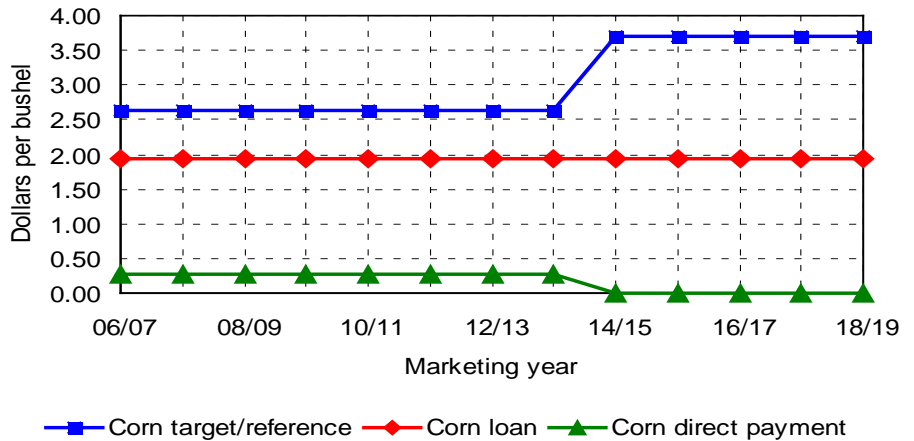
Net farm income declines from 2013 record



- Net farm income reached record levels in 2013 in nominal terms and hit the highest level since the 1970s in inflation-corrected, real terms.
- Lower crop prices contribute to a sharp reduction in net farm income in 2014, even though most livestock producers should experience a more profitable year.
- Projected farm income declines further in subsequent years but remains above the levels of 2006-2011, in part because of a moderation in production expenses.

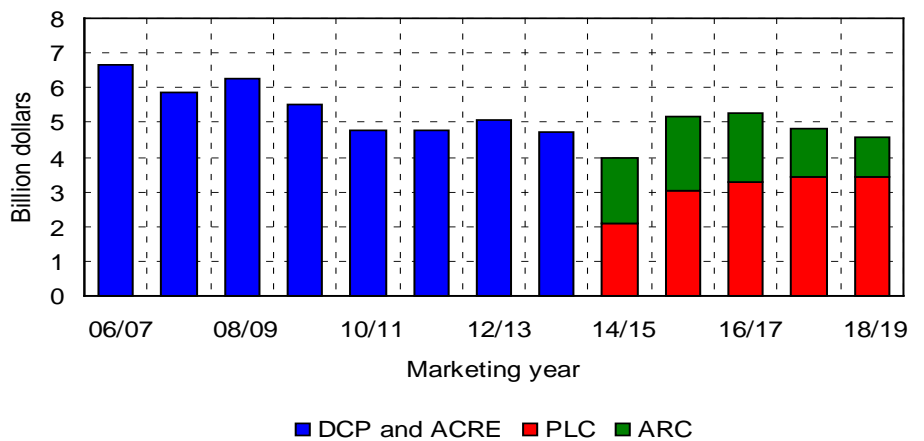
# New farm bill provisions and effects

Baseline incorporates new farm bill provisions



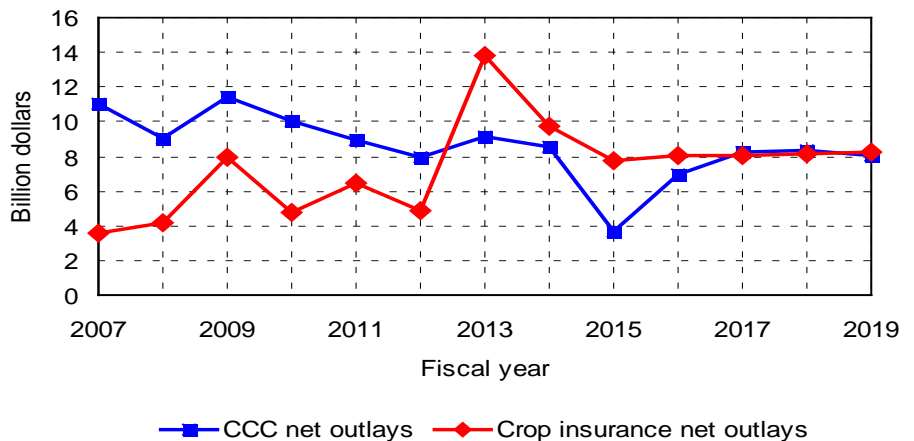
- The baseline incorporates provisions of the Agricultural Act of 2014, the new farm bill.
- For crop producers, this includes the elimination of direct and countercyclical (DCP) payments and the average crop revenue election (ACRE) program.
- It also includes the creation of two new options, price loss coverage (PLC) and agriculture risk coverage (ARC), as well as new crop insurance policies and more.

New crop payments replace DCP and ACRE



- The new PLC and ARC programs cost little when crop prices and revenues are high, but could make large payments when prices or revenues are low.
- Given all of the assumptions of the baseline, average PLC and ARC payments for the 2014-18 crops are just under \$5 billion per year.
- ARC spending is greatest in 2014 and 2015 but declines in later years as the moving averages that determine benchmark revenues adjust.

Crop insurance costs can exceed CCC net outlays

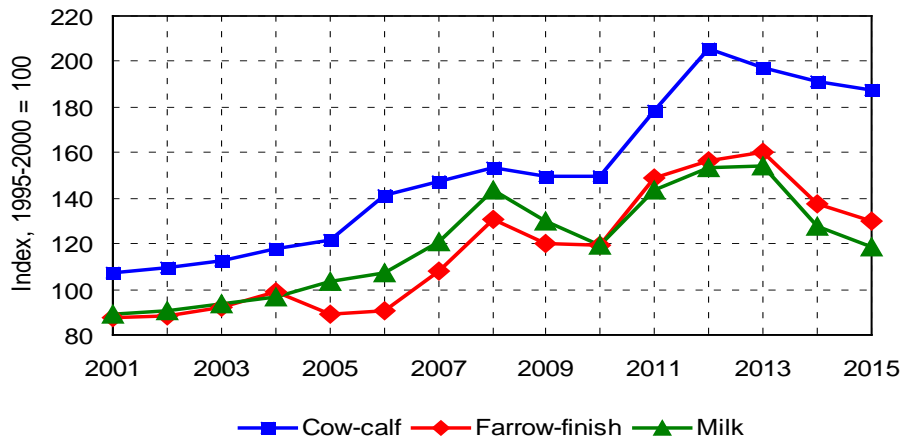


- Crop insurance budgetary costs reached record highs in fiscal year (FY) 2013 because of the 2012 drought.
- Lower prices reduce the value of crops insured and thus of premium subsidies.
- Offsetting this effect is the impact of new crop insurance options.
- Net CCC outlays (covering commodity programs, the conservation reserve and other programs) dip in FY 2015 but rebound to about \$8 billion per year.

# Livestock and dairy outlook highlights

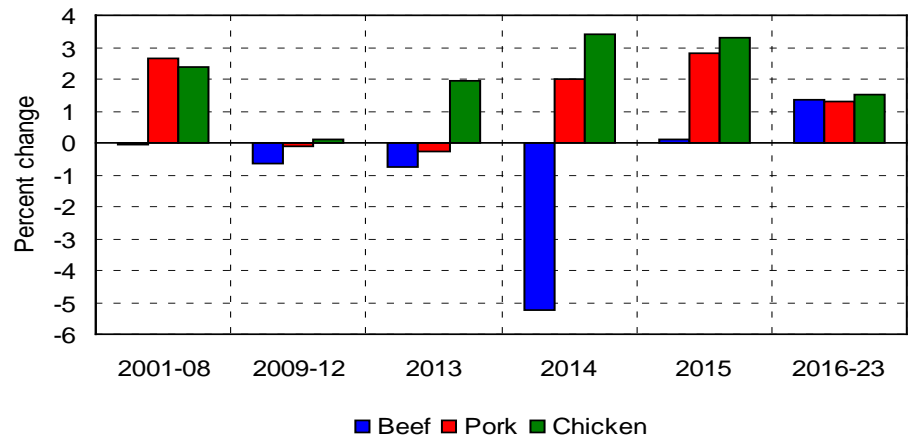
## Input costs continue to decline

- Livestock producers have faced sharply higher input costs in recent years.
- Higher feed prices have contributed most to higher livestock production costs, although higher energy prices and land values have also played a role.
- As input costs decline over the next couple of years, the prospects for improved profitability brighten for many operations.



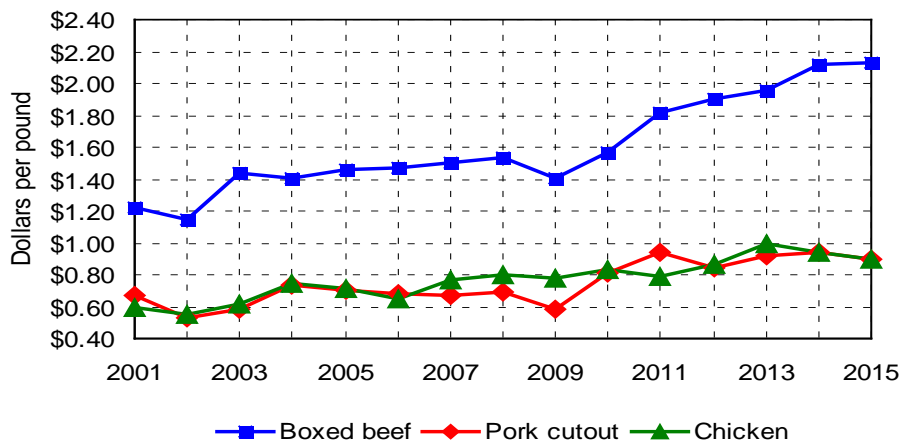
## Meat production growth varies by species in 2014

- Total meat production in 2013 was lower than the 2008 level.
- As feed costs decline, chicken and pork producers are able to increase production more quickly than beef producers.
- It will take years for beef production to increase in response to higher profitability.
- Animals held back from market allow inventory numbers to grow, leading to a sharp decline in 2014 beef production.



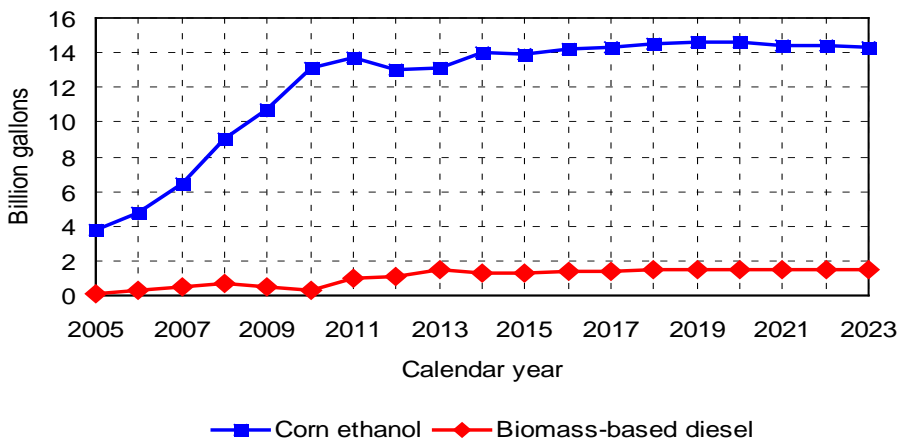
## Beef prices reach record highs

- The monthly choice boxed beef cutout value topped \$2.40 per pound in January 2014, which is an increase of more than 25 percent from the January 2013 level.
- Wholesale pork and chicken prices are expected to decline modestly through 2015 due to higher domestic availability.
- International dairy product prices are also near record levels in early 2014, leading to expectations of strong U.S. dairy prices.



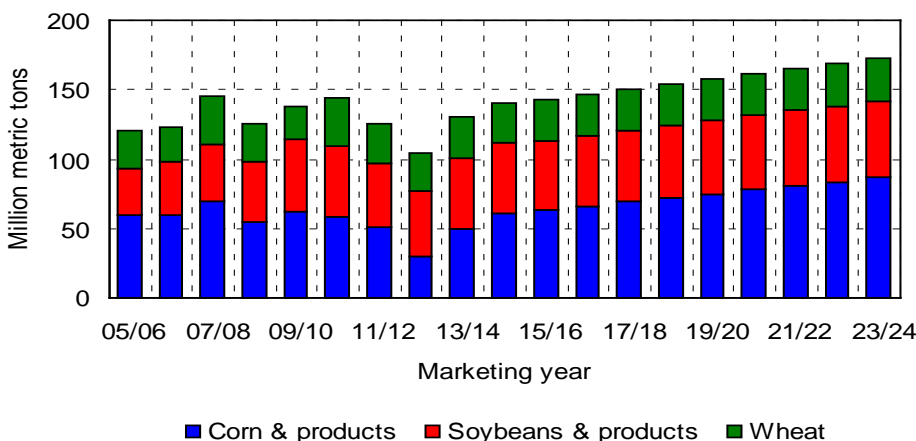
# Other highlights: Biofuels, exports and food prices

## Biofuel production reaches plateau



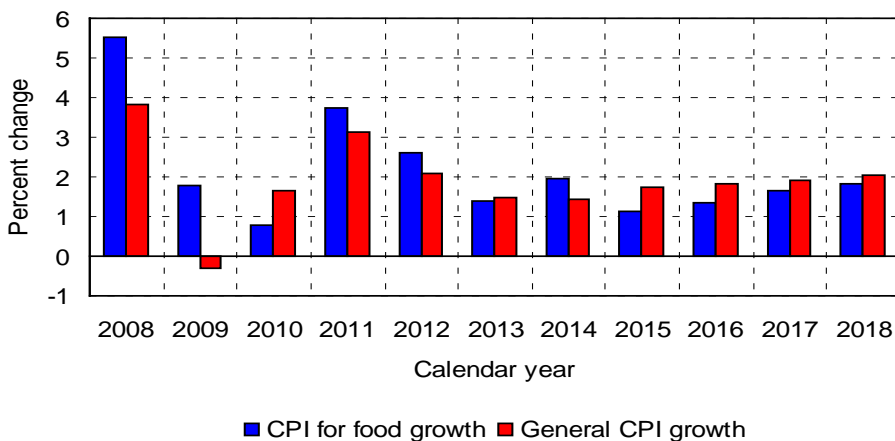
- The outlook assumes that EPA's proposed 2014 RFS rule will be adopted, and that a similar approach will be used to set biofuel use mandates in later years.
- Given the assumptions, domestic use of ethanol and biodiesel only grows slightly over the next several years.
- Declining motor gasoline use in later years could put downward pressure on domestic ethanol use.
- U.S. ethanol exports could result in some production in excess of domestic use.

## Crop export growth resumes



- U.S. corn exports declined sharply between 2010/11 and 2012/13, as high prices contributed to increased foreign production and limited use.
- Lower prices have contributed to a strong recovery in U.S. grain and oilseed exports this year, and further growth is expected.
- U.S. agricultural markets will continue to be strongly affected by foreign developments, such as political confrontation in Ukraine or weather conditions in Brazil.

## Food prices increase less than inflation by 2015



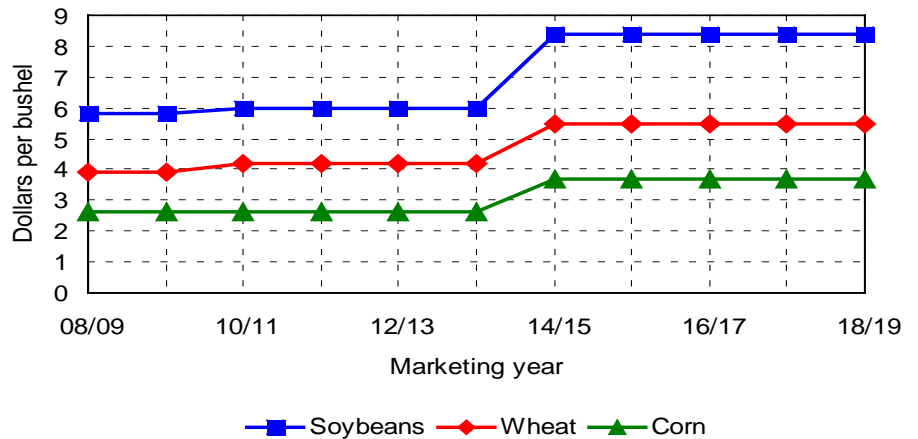
- The consumer price index (CPI) for food grew by 20 percent from 2006-2012, while the all-items CPI was only up 14 percent.
- Food inflation, though modest at 2 percent, is again projected to outpace the general inflation rate in 2014.
- Lower projected prices for many farm commodities help slow food price inflation in 2015.
- Energy prices and labor costs continue to be important drivers of retail food prices.



# Policy assumptions under the new farm bill

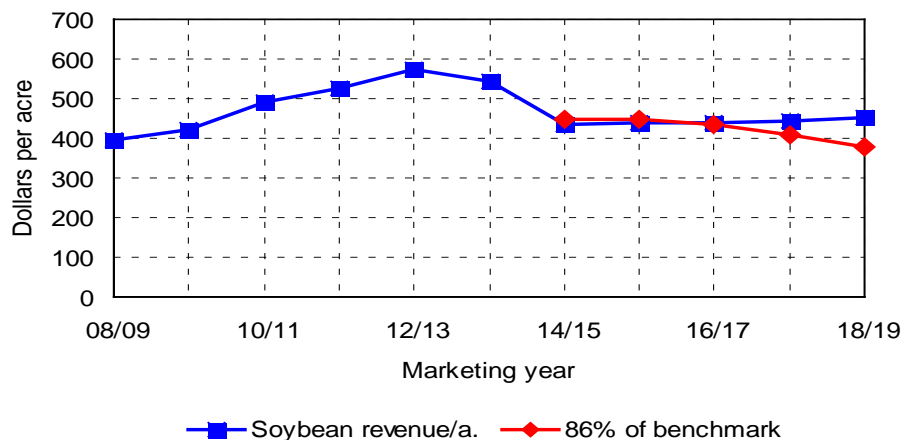
## Reference prices exceed old target prices

- The new farm bill eliminates the DCP and ACRE programs and creates several new programs.
- PLC is one new option for grain and oilseed producers. Participating producers receive a payment when national season-average farm prices fall below fixed reference prices.
- The new reference prices are higher than the target prices that were used in calculating countercyclical payments under the previous farm bill.



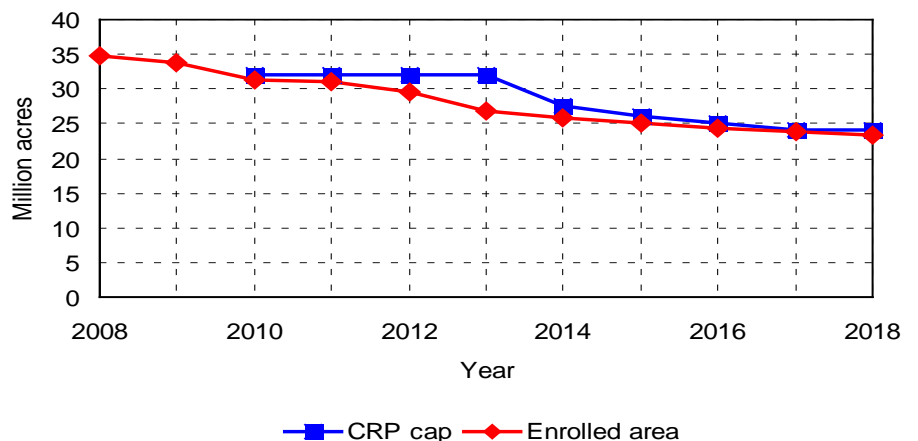
- ARC is the other new option for grain and oilseed producers. Payments occur when county or farm-level revenues per acre fall below 86 percent of a benchmark.
- The benchmark depends on moving five-year Olympic averages of national prices and county or farm yields.
- For illustration purposes only, the chart uses national average soybean prices and yields. With these assumptions, payments would occur in 2014/15 and 2015/16, but not in later years.

## ARC benchmarks depend on moving averages



## Conservation reserve cap is reduced

- Under the previous farm bill, up to 32 million acres could be enrolled in the conservation reserve.
- The new farm bill reduces that cap in steps to 24 million acres by 2017.
- Actual enrollment was far below the legislated cap in 2012 and 2013. Projected enrollment is near the new limit.

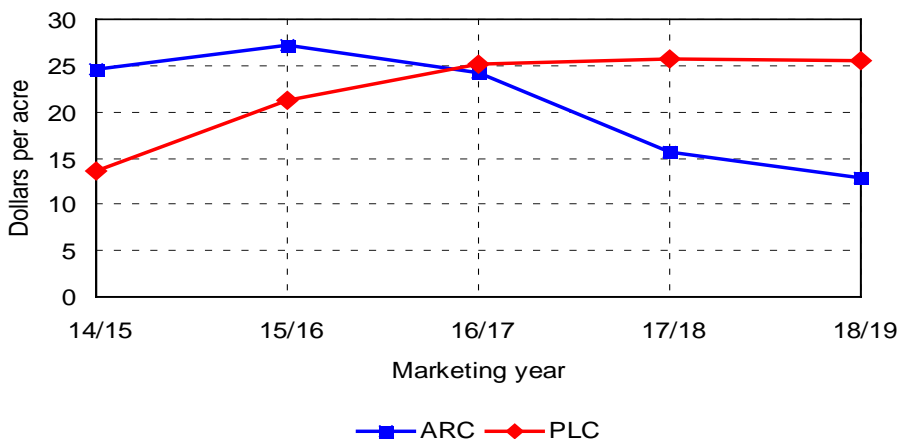


## Selected policy assumptions, 2014-23

Policy	Description																				
Direct payments	Not available for 2014 and subsequent crop years																				
Countercyclical payments	Not available for 2014 and subsequent crop years																				
ACRE program	Not available for 2014 and subsequent crop years																				
Price loss coverage (PLC)	<p>Makes payments when season average price falls below fixed reference prices:</p> <table style="margin-left: 20px;"> <tr><td>Corn</td><td>\$3.70/bu.</td></tr> <tr><td>Soybeans</td><td>\$8.40/bu.</td></tr> <tr><td>Wheat</td><td>\$5.50/bu.</td></tr> <tr><td>Rice</td><td>\$14.00/cwt (\$16.10/cwt for Japonica)</td></tr> <tr><td>Sorghum</td><td>\$3.95/bu.</td></tr> <tr><td>Barley</td><td>\$4.95/bu.</td></tr> <tr><td>Oats</td><td>\$2.40/bu.</td></tr> <tr><td>Peanuts</td><td>\$535/ton</td></tr> <tr><td>Sunflowers</td><td>20.15 cents/lb.</td></tr> <tr><td>Cotton</td><td>not available</td></tr> </table> <p>Paid on 85% of base acreage and program yields</p>	Corn	\$3.70/bu.	Soybeans	\$8.40/bu.	Wheat	\$5.50/bu.	Rice	\$14.00/cwt (\$16.10/cwt for Japonica)	Sorghum	\$3.95/bu.	Barley	\$4.95/bu.	Oats	\$2.40/bu.	Peanuts	\$535/ton	Sunflowers	20.15 cents/lb.	Cotton	not available
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Cotton	not available																				
Agriculture Risk Coverage (ARC)	<p>Makes payments when county or farm per-acre revenues fall below 86% of a benchmark</p> <p>County option benchmark: 5-year Olympic average price multiplied by 5-year Olympic average yield</p> <p>Farm option benchmark: 5-year Olympic average of weighted farm revenue per acre</p> <p>Maximum payment is 10% of benchmark value</p> <p>Paid on 85% (county option) or 65% (farm option) of base acreage</p> <p>Alternative to price loss coverage</p> <p>Available for program crops (not upland cotton)</p>																				
Marketing loan program	Continues 2008 farm bill provisions for crops other than upland cotton																				
Supplemental coverage option	<p>Available for PLC participants beginning in 2015</p> <p>Area crop insurance available in addition to conventional insurance</p> <p>Covers range between 86% and individual coverage level</p> <p>65% of premium subsidized</p>																				
Upland cotton	<p>Stacked income protection program (STAX)</p> <p style="margin-left: 20px;">Area crop insurance available in addition to conventional insurance</p> <p style="margin-left: 20px;">80% of premium subsidized</p> <p>Transition payment in 2014 (STAX not available until 2015)</p> <p>Loan rate varies in range depending on recent world cotton prices</p> <p>No cotton PLC or ARC programs</p> <p>Former cotton base eligible for PLC or ARC if planted to other crops</p>																				
Sugar	Continues 2008 farm bill provisions																				
Conservation reserve	Caps conservation reserve acreage at 24 million acres by 2017																				
Dairy	<p>Margin insurance program established</p> <p>MILC not available after new margin program begins</p> <p>Dairy product price support program not available for 2014 and subsequent years</p>																				

# Crop program participation under the new farm bill

Paths differ for projected average corn payments



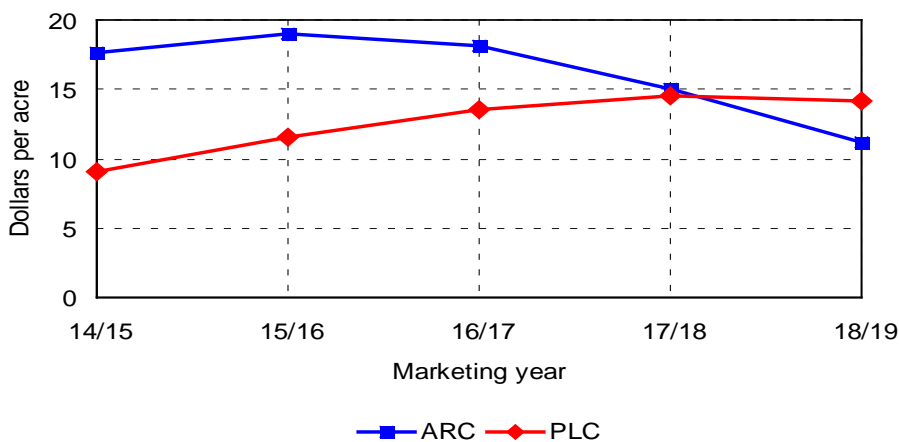
- Under the new farm bill, producers must make a one-time choice to participate in ARC or PLC for the 2014-2018 crops.

- Estimated national average ARC payments for corn producers exceed PLC payments in 2014/15 and 2015/16, but the opposite is true in later years.

- This suggests some corn producers may face a difficult choice.

- PLC participants also have the option of purchasing Supplemental Coverage Option (SCO) beginning in 2015/16.

Projected soybean payments also differ

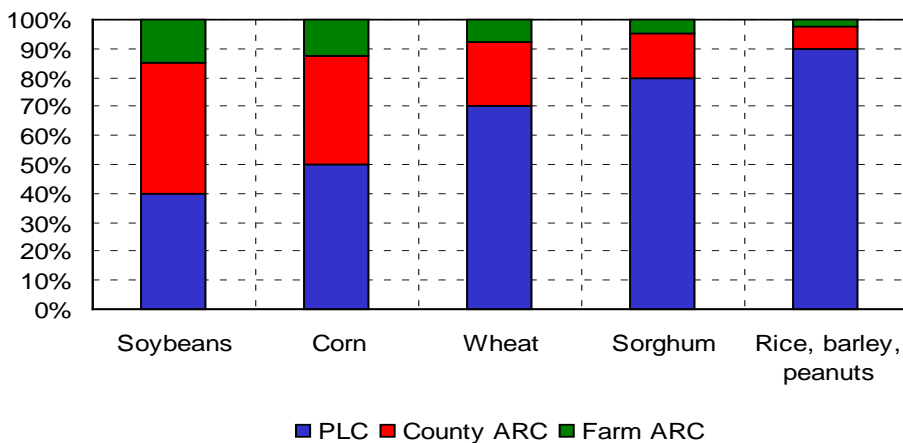


- The story for soybeans is similar, although expected ARC payments exceed PLC payments for the first four years.

- Producers would also need to consider possible SCO benefits, which are only available to PLC participants.

- Producers can enroll in the county-based ARC program, which pays on 85 percent of base area, or in the farm-based ARC, which considers all program crops on a farm and pays on 65 percent of base area.

More PLC enrollment assumed for most crops



- Changing market circumstances, final sign-up rules and many other factors will affect producer enrollment choices.

- Based in part on projected average payments, the baseline assumes most producers of wheat, sorghum, rice, barley and peanuts will enroll in PLC.

- For soybeans and corn, assumed enrollment is split more evenly between ARC and PLC. Of those enrolled in ARC, three-fourths are assumed to choose the county-based option.

## Participation rate assumptions\*

	PLC	ARC		SCO**	STAX**
		County	Farm		
Corn	50.0%	37.5%	12.5%	25.0%	n.a.
Soybeans	40.0%	45.0%	15.0%	20.0%	n.a.
Wheat	70.0%	22.5%	7.5%	35.0%	n.a.
Upland cotton	n.a.	n.a.	n.a.	0.0%	95.0%
Sorghum	80.0%	15.0%	5.0%	40.0%	n.a.
Barley	90.0%	7.5%	2.5%	45.0%	n.a.
Rice	90.0%	7.5%	2.5%	45.0%	n.a.
Peanuts	90.0%	7.5%	2.5%	45.0%	n.a.

\*PLC and ARC are percent of base acres. SCO and STAX are percent of planted acres.

\*\*SCO and STAX are assumed to not be available until 2015

## Payments per participating acre, 2014-18 average

	Average ARC	PLC	SCO*	STAX*
Corn	20.91	22.24	8.94	n.a.
Soybeans	16.21	12.58	5.09	n.a.
Wheat	9.84	16.27	3.84	n.a.
Upland cotton	n.a.	n.a.	n.a.	22.60
Sorghum	8.16	19.62	3.14	n.a.
Barley	10.76	30.54	4.10	n.a.
Rice	8.44	53.54	12.90	n.a.
Peanuts	19.76	60.63	**	n.a.

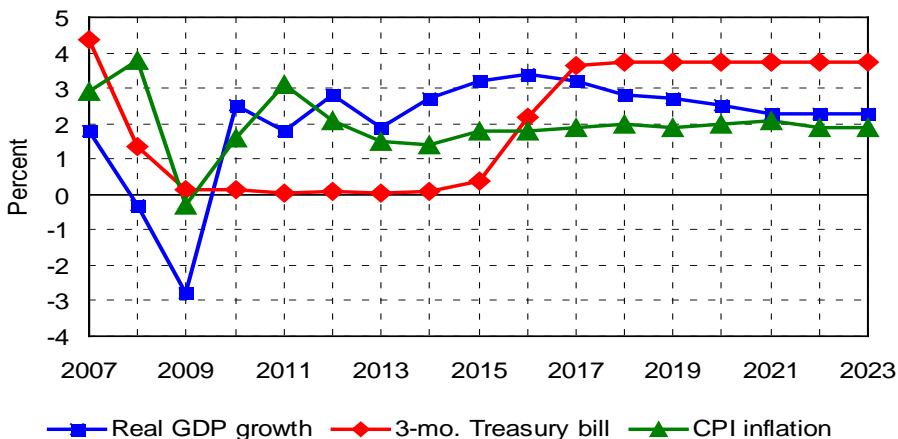
\*SCO and STAX are averaged from 2015-18 and are calculated as change in net indemnities per acre. This may include other non-SCO and non-STAX effects.

\*\*Peanut net indemnities are not explicitly represented in the model.

# Macroeconomic assumptions and farm prices paid

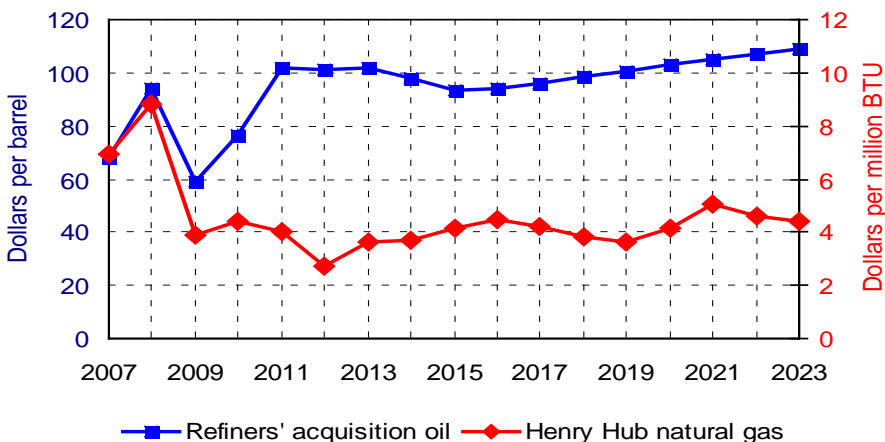
U.S. economic growth expected to accelerate

- IHS Global Insight forecasted in January that U.S. real GDP growth would accelerate, averaging about 3 percent per year for the next five years.
- The unemployment rate continues to decline slowly.
- Short-term interest rates increase in 2016 and reach pre-recession levels in 2017.
- Inflation is forecast to remain low.



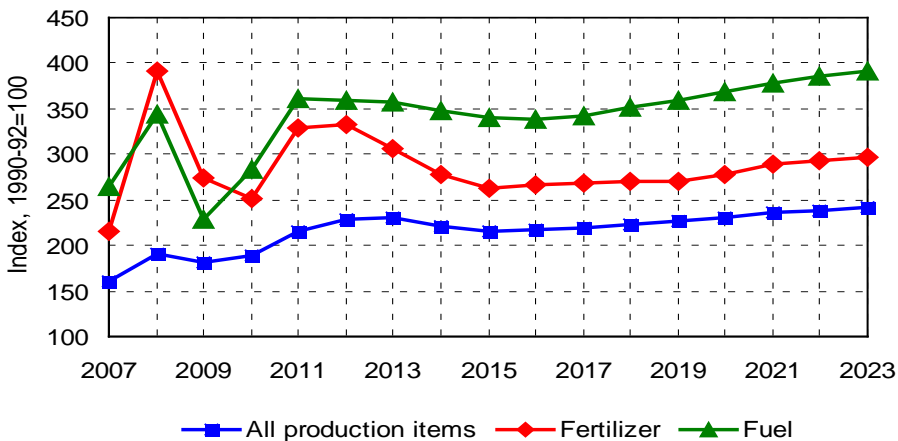
Oil and natural gas prices follow separate paths

- Oil and natural gas prices both fell in the recession. Since then, oil prices have recovered to new peaks, while natural gas prices have declined.
- IHS Global Insight forecasts lower oil prices for 2014 and 2015 but then modest increases in later years.
- Natural gas prices remain well below pre-recession levels.
- The 500 alternative outcomes examined consider a range of energy prices.



Lower fertilizer prices reduce farm production costs

- Fertilizer prices fell during 2013 and further declines are projected for 2014 and 2015.
- Continued low natural gas prices have reduced the cost of producing nitrogen fertilizer.
- Lower fuel and feed prices also contribute to a dip in the PPI for farm production items in 2014 and 2015, and the rate of increase in later years is modest.



## Macroeconomic assumptions

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Real GDP growth	(Percentage change from previous year)										
United States	1.9	2.7	3.2	3.4	3.2	2.8	2.7	2.5	2.3	2.3	2.3
China	7.7	8.1	8.3	7.6	7.1	6.7	7.1	6.9	6.8	6.5	6.2
World	2.5	3.3	3.8	3.9	3.9	3.7	3.8	3.7	3.7	3.7	3.6
Population growth											
United States	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
World	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.9	0.9
U.S. CPI, all urban consumers	1.5	1.4	1.8	1.8	1.9	2.0	1.9	2.0	2.1	1.9	1.9
U.S. unemployment rate	(Percent)										
U.S. unemployment rate	7.4	6.5	5.9	5.4	5.1	5.0	5.0	4.9	5.0	5.1	5.1
3-month Treasury bill rate	0.1	0.1	0.4	2.2	3.6	3.7	3.7	3.7	3.7	3.7	3.7
Aaa corporate bond rate	4.2	4.8	4.9	5.5	6.1	6.2	6.2	6.2	6.2	6.2	6.2
Petroleum prices	(Dollars per barrel)										
West Texas intermediate	97.97	97.86	94.64	94.89	97.31	100.28	102.82	105.56	108.33	110.28	112.27
Refiners' acquisition cost	102.07	97.96	93.61	93.73	96.27	98.82	100.82	103.04	105.37	107.20	109.09
Natural gas price	(Dollars per million BTU)										
Henry Hub	3.66	3.69	4.17	4.49	4.21	3.85	3.66	4.13	5.07	4.62	4.43
Exchange rates	(Currency per dollar)										
Euro	0.75	0.77	0.77	0.75	0.74	0.73	0.72	0.72	0.71	0.71	0.71
Chinese yuan	6.15	6.01	5.84	5.73	5.65	5.57	5.50	5.44	5.42	5.43	5.45

Source: IHS Global Insight, Jan. 2014

## Indices of prices paid by farmers

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Production items, interest, taxes and wages	(1990-92=100)										
Production items	225	218	215	218	221	224	228	232	238	242	246
Feed	231	221	216	218	220	223	226	230	236	239	242
Livestock & poultry	255	207	186	185	185	185	186	185	184	183	182
Seeds	171	185	181	174	171	167	166	167	170	171	174
Fertilizer	378	381	381	382	386	393	400	410	420	426	433
Mixed fertilizer	307	278	263	267	268	270	271	277	289	293	297
Nitrogen fertilizer	280	258	245	248	250	251	252	258	268	272	275
Potash and phosph.	322	284	267	271	272	275	275	282	295	300	304
Agricultural chemicals	344	290	277	281	283	284	286	292	302	306	309
Fuels	157	157	160	164	167	170	172	177	182	183	186
Supplies & repairs	357	347	340	339	343	352	360	369	379	385	391
Autos & trucks	172	174	178	182	186	190	194	199	204	208	212
Farm machinery	120	121	122	124	126	128	129	131	134	135	137
Building material	264	270	274	280	287	294	301	310	319	326	335
Farm services	179	182	186	190	193	195	197	201	204	206	208
Interest*	171	172	174	178	182	186	190	196	203	208	213
Taxes**	143	151	158	173	188	194	196	201	206	209	213
Wage rates	234	239	246	253	257	261	266	273	281	286	292
	206	210	216	222	229	236	244	252	259	267	275

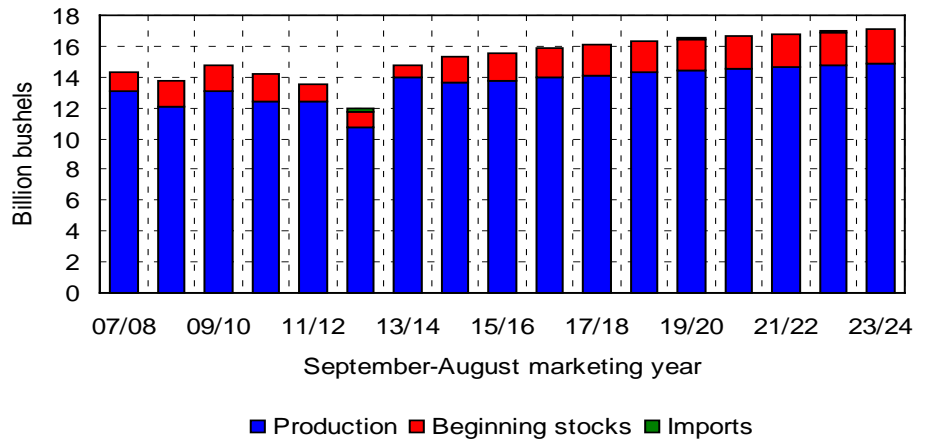
\*Interest per acre on farm real estate debt and interest rate on farm non-real estate debt.

\*\*Farm real estate taxes payable per acre.

# Corn

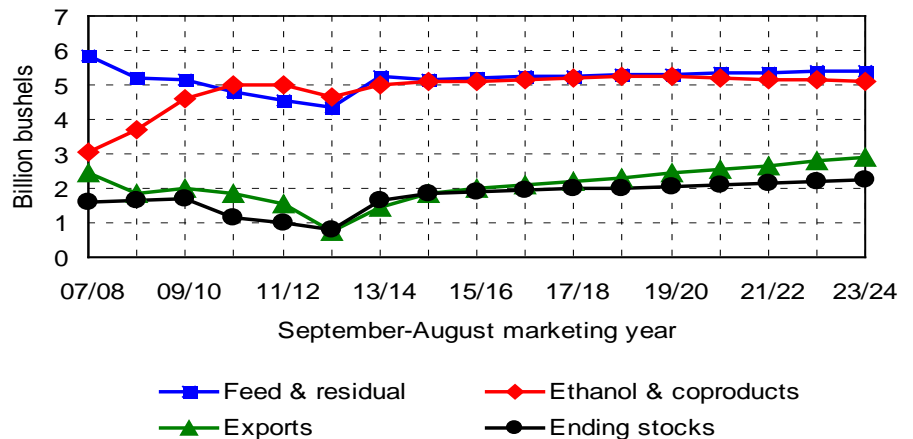
## Corn supplies rebound, weigh on prices

- U.S. corn production increased by 3 billion bushels in 2013, as yields recovered from the drought-reduced levels of 2012.
- In 2014, projected production declines slightly, as an increase in average yields is more than offset by lower area planted.
- In spite of the reduction in corn production in 2014, total corn supplies increase because of larger carry-in stocks.
- These increased supplies contribute to lower corn prices in 2013/14 and 2014/15.



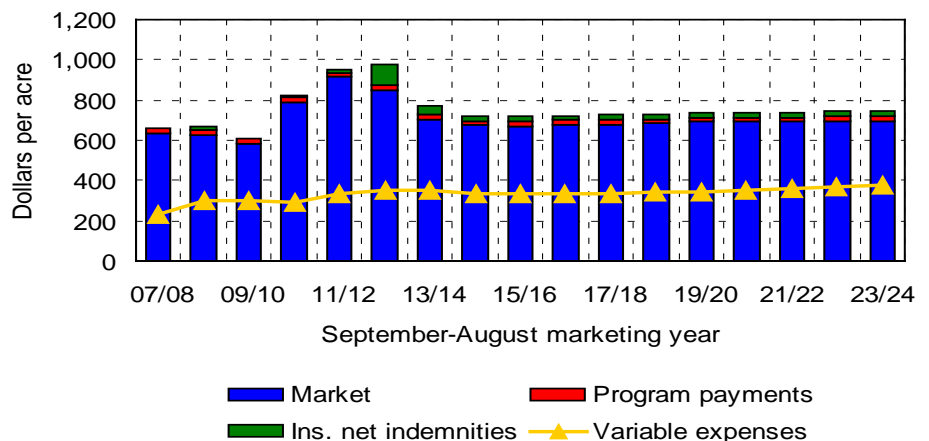
## Corn use rebounds with lower prices

- High prices caused by the drought resulted in reduced use of corn during the 2012/13 marketing year.
- Much lower prices allow all major categories of corn use and ending stocks to rebound in 2013/14.
- Lower-priced corn and growing demand from China and other markets contributes to steady growth in U.S. corn exports.
- Ethanol and coproduct use of corn is fairly stable, given assumptions about biofuel policy and energy markets.



## Corn returns decline from recent peak

- High corn prices and large insurance net indemnities (payments for losses minus producer-paid premiums) resulted in record per-acre income in 2012/13.
- Lower prices reduce market revenues in 2013/14 and 2014/15.
- Variable expenses (which exclude land costs) decline in 2014/15 with lower fertilizer prices.
- Projected farm program payments are small relative to corn market receipts.



## Corn supply and use

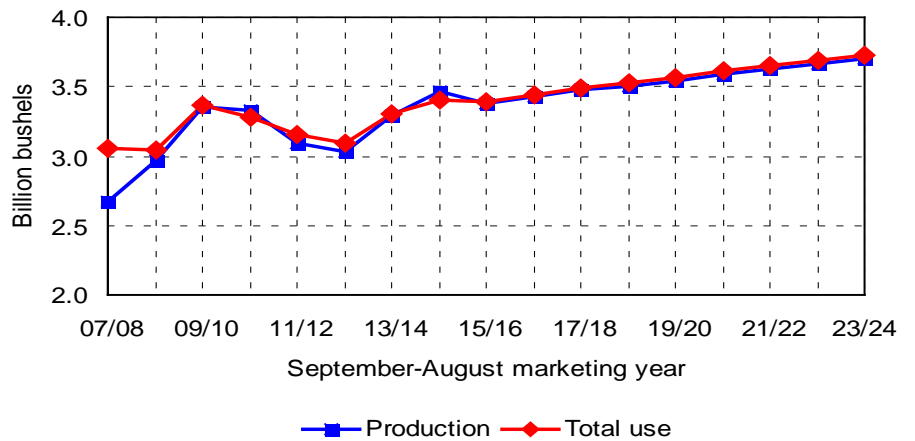
September-August year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>	(Million acres)										
Planted area	95.4	91.3	90.6	91.1	91.0	91.3	91.2	90.8	90.5	90.1	89.9
Harvested area	87.7	83.4	82.8	83.2	83.1	83.3	83.3	82.9	82.6	82.3	82.1
<b>Yield</b>	(Bushels per harvested acre)										
	158.8	163.5	165.6	167.8	169.8	171.7	173.7	175.8	177.6	179.4	181.2
<b>Supply</b>	(Million bushels)										
Beginning stocks	14,781	15,338	15,577	15,884	16,095	16,324	16,518	16,667	16,817	16,949	17,106
Production	821	1,665	1,828	1,883	1,949	1,980	2,012	2,047	2,103	2,135	2,176
Imports	13,925	13,638	13,714	13,965	14,111	14,308	14,471	14,585	14,678	14,778	14,895
	35	35	35	35	35	35	35	35	35	35	35
<b>Domestic use</b>	11,669	11,635	11,718	11,834	11,909	11,996	12,036	12,022	12,012	11,995	11,985
Feed and residual	5,264	5,134	5,177	5,228	5,250	5,283	5,310	5,343	5,369	5,373	5,395
Ethanol and coproducts	5,007	5,081	5,112	5,170	5,214	5,259	5,267	5,215	5,171	5,142	5,103
HFCS	500	507	507	508	510	511	511	510	509	510	511
Seed	24	23	23	23	24	23	23	23	23	23	23
Food and other	875	890	898	905	912	918	925	932	939	946	953
<b>Exports</b>	1,447	1,875	1,976	2,100	2,205	2,316	2,435	2,541	2,669	2,778	2,883
<b>Total use</b>	13,116	13,510	13,694	13,935	14,114	14,312	14,471	14,564	14,682	14,773	14,868
<b>Ending stocks</b>	1,665	1,828	1,883	1,949	1,980	2,012	2,047	2,103	2,135	2,176	2,238
CCC inventory	0	0	0	0	0	0	0	0	0	0	0
Under loan	88	130	149	160	164	165	170	181	183	192	198
Other stocks	1,577	1,698	1,735	1,788	1,817	1,847	1,877	1,922	1,952	1,984	2,040
<b>Prices, program provisions</b>	(Dollars per bushel)										
Farm price	4.42	4.17	4.09	4.07	4.06	4.04	4.02	3.97	3.93	3.92	3.87
Loan rate	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Target/reference price	2.63	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70	3.70
Direct payment rate	0.28	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Base area + allocated generic</b>	(Million acres)										
	84.4	87.8	87.8	87.8	87.8	87.9	87.9	87.9	87.9	87.9	87.9
<b>PLC participation rate</b>	(Percent)										
	n.a.	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
<b>ARC participation rate</b>	n.a.	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
<b>Returns and payments</b>	(Dollars)										
Gross market revenue/a.	701.60	676.19	669.16	673.64	680.99	685.30	690.66	690.37	691.08	694.65	693.86
Variable expenses/a.	354.48	338.29	333.37	334.56	338.15	342.55	347.08	353.82	363.44	370.06	374.88
Market net return/a.	347.12	337.89	335.79	339.08	342.84	342.75	343.58	336.55	327.64	324.59	318.98
Marketing loan benefits/a.*	0.00	0.04	0.05	0.43	0.19	0.84	0.57	1.12	0.50	0.86	1.62
DCP payments/base a.*	21.66	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ACRE/planted a.*	2.22	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Payments to participants</b>	(Dollars)										
PLC/base a.*	n.a.	13.51	21.29	25.22	25.72	25.44	27.00	29.83	30.25	32.91	34.59
ARC/base a.*	n.a.	24.65	27.14	24.20	15.63	12.94	13.28	13.60	14.36	14.92	15.34
Insurance net indemnities/a.*	42.20	22.41	23.25	23.37	23.42	23.94	23.87	23.82	23.89	24.03	24.50

\*Marketing loan benefits, DCP payments, ACRE payments and insurance net indemnities are averaged across all acres. PLC and ARC payments are per participating acre. All projections are averages across 500 stochastic outcomes.



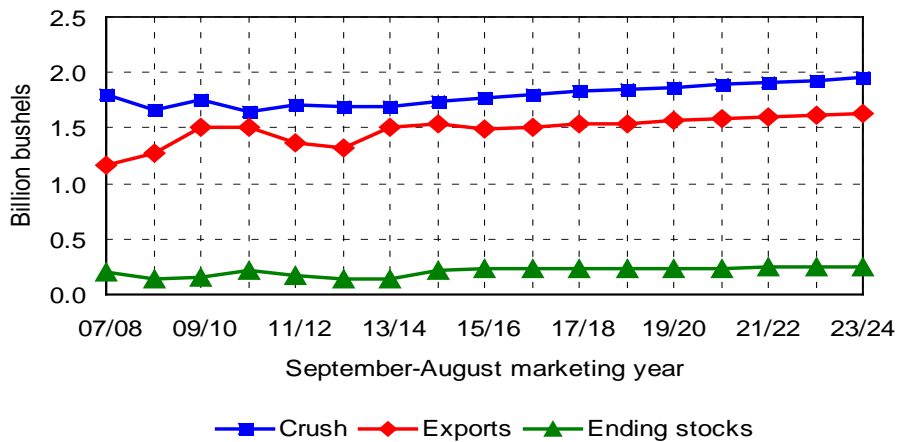
# Soybeans

Soybean production increases in 2013 and 2014



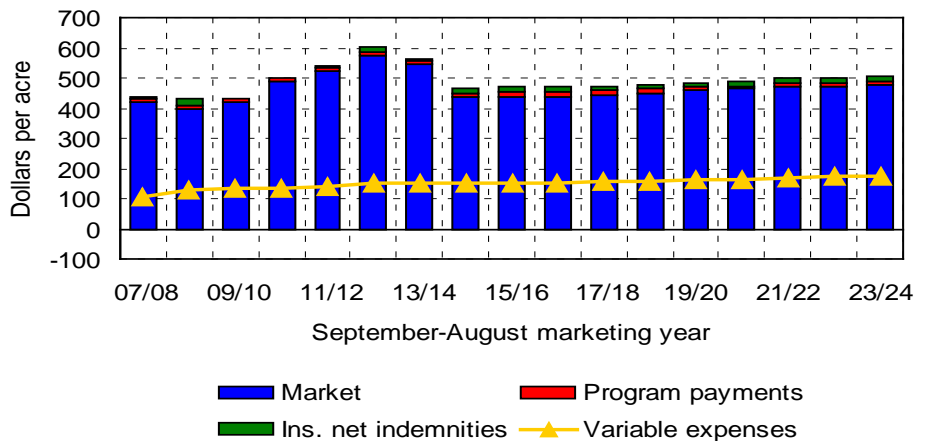
- Soybean production increased in 2013 as yields rebounded from 2012 drought-reduced levels.
- Given strong soybean prices relative to corn, soybean acreage is projected to increase in 2014.
- If soybean yields also increase in 2014, there could be another significant increase in soybean production.
- Combined with large supplies from South America, the result is sharply lower projected soybean prices.

Soybean exports and crush both grow



- Strong demand from China has contributed to a rebound in soybean exports in 2013/14.
- One important uncertainty is how lower prices will affect production by competing exporters.
- Domestic soybean crush also increases slowly over time in response to rising demand for U.S. soybean meal and soybean oil.

Soybean returns fall from 2012/13 record



- High prices led to record levels of soybean returns per acre in 2012/13.
- In 2013/14, the decline in returns is fairly small as higher yields offset part of the effect of lower prices.
- The projected decline in soybean prices in 2014/15 results in much lower returns per acre.

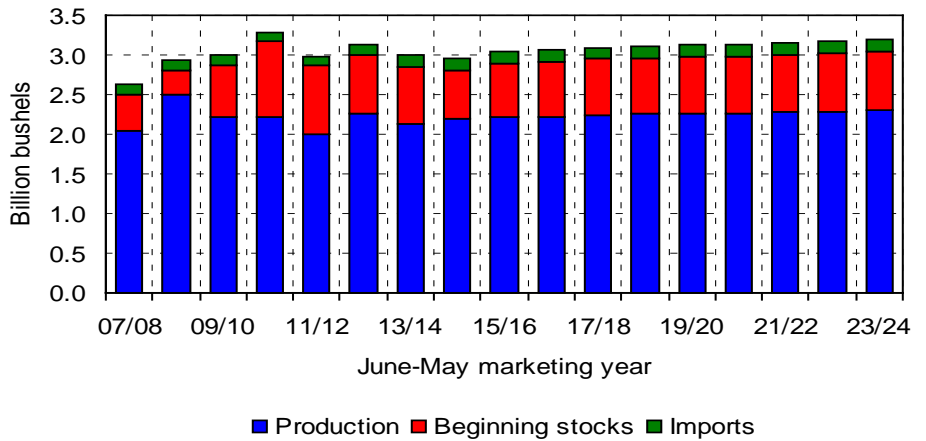
## Soybean supply and use

September-August year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>	(Million acres)										
Planted area	76.5	78.7	75.7	76.0	76.5	76.3	76.6	76.8	77.0	77.2	77.3
Harvested area	75.9	77.7	74.8	75.1	75.5	75.3	75.6	75.8	76.0	76.2	76.3
<b>Yield</b>	(Bushels per harvested acre)										
	43.3	44.6	45.1	45.6	46.1	46.5	46.9	47.3	47.8	48.1	48.6
<b>Supply</b>	(Million bushels)										
Beginning stocks	141	144	224	228	231	239	237	238	239	242	249
Production	3,289	3,461	3,373	3,423	3,478	3,498	3,545	3,590	3,629	3,669	3,704
Imports	25	25	25	25	25	25	25	25	25	25	25
<b>Domestic use</b>	1,809	1,873	1,899	1,933	1,959	1,983	2,006	2,029	2,053	2,074	2,098
Crush	1,699	1,745	1,771	1,802	1,826	1,848	1,869	1,890	1,911	1,931	1,952
Seed and residual	110	128	128	131	133	135	137	139	141	143	145
<b>Exports</b>	1,501	1,533	1,495	1,512	1,536	1,542	1,564	1,585	1,598	1,613	1,631
<b>Total use</b>	3,310	3,406	3,394	3,445	3,495	3,525	3,570	3,614	3,650	3,687	3,729
<b>Ending stocks</b>	144	224	228	231	239	237	238	239	242	249	248
CCC inventory	0	0	0	0	0	0	0	0	0	0	0
Under loan	7	30	32	35	37	38	38	38	40	42	42
Other stocks	137	194	195	196	201	200	200	200	203	207	207
<b>Prices, program provisions</b>	(Dollars per bushel)										
Farm price	12.57	9.84	9.80	9.68	9.68	9.77	9.85	9.87	9.94	9.89	9.88
Illinois processor price	12.98	10.33	10.29	10.18	10.17	10.26	10.34	10.36	10.42	10.37	10.37
Loan rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Target/reference price	6.00	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40	8.40
Direct payment rate	0.44	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Base area + allocated generic</b>	(Million acres)										
	50.2	53.1	53.0	53.1	53.1	53.1	53.1	53.1	53.1	53.2	53.2
<b>PLC participation rate</b>	(Percent)										
	n.a.	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
<b>ARC participation rate</b>	n.a.	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
<b>Returns and payments</b>	(Dollars)										
Gross market revenue/a.	545.04	434.86	438.01	437.57	442.00	450.31	457.67	462.87	470.47	471.35	475.84
Variable expenses/a.	154.05	153.27	152.73	153.79	155.69	158.33	161.16	164.78	169.17	172.11	174.56
Market net return/a.	390.99	281.58	285.28	283.78	286.31	291.98	296.51	298.09	301.30	299.25	301.27
Marketing loan benefits/a.*	0.00	0.00	0.51	0.46	0.35	1.15	0.11	0.37	0.40	0.99	0.34
DCP payments/base a.*	10.26	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ACRE/planted a.*	0.28	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Payments to participants</b>	(Dollars)										
PLC/base a.*	n.a.	9.03	11.56	13.52	14.56	14.22	14.34	12.07	13.20	14.68	12.49
ARC/base a.*	n.a.	17.69	18.96	18.18	15.06	11.14	8.95	9.03	9.08	9.62	9.26
Insurance net indemnities/a.*	5.43	15.73	14.73	15.26	15.38	15.56	16.10	16.35	16.63	17.05	17.37
<b>Crush margin</b>	(Dollars per bushel)										
	1.73	1.60	1.65	1.71	1.68	1.68	1.67	1.65	1.65	1.62	1.62

\*Marketing loan benefits, DCP payments, ACRE payments and insurance net indemnities are averaged across all acres. PLC and ARC payments are per participating acre. All projections are averages across 500 stochastic outcomes.

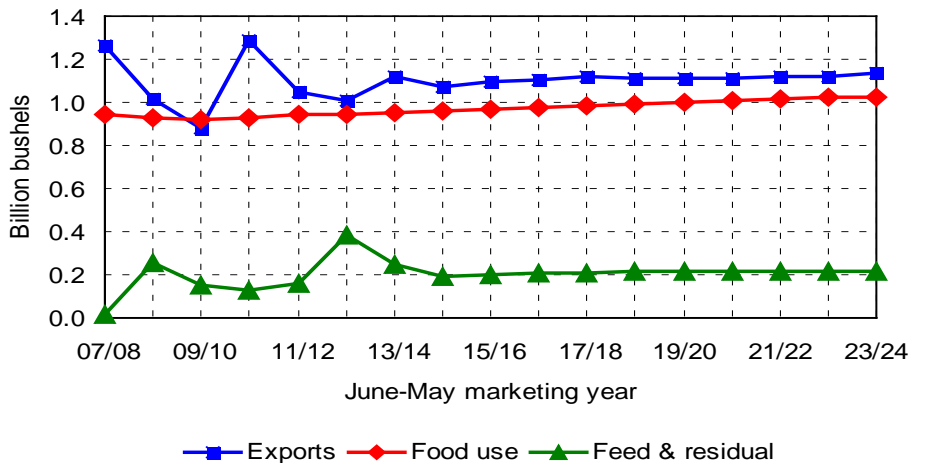
# Wheat

Wheat supplies show little trend



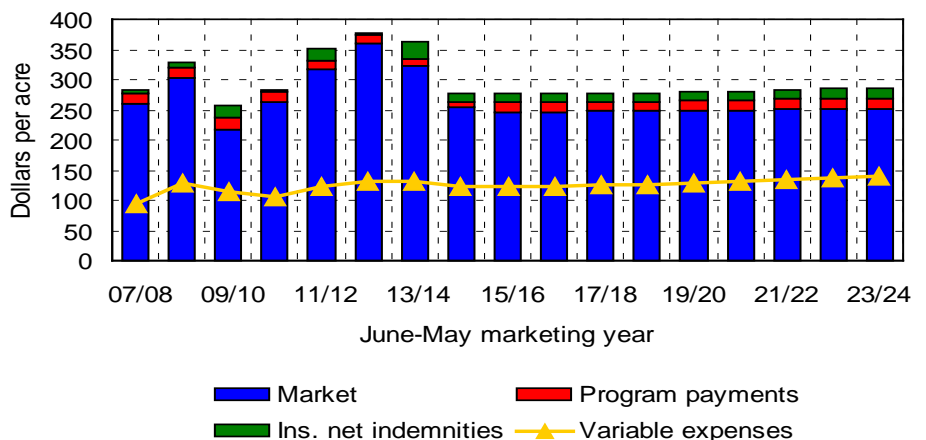
- Wheat production declined in 2013, as 11 million planted acres were not harvested.
- Projected wheat production averages about 2.2 billion bushels for the next several years, but will vary based on weather and market conditions.
- Imports have increased, in part because of changes in Canadian regulations.

Wheat exports increase in 2013/14, then recede



- U.S. wheat exports have increased in 2013/14, but could be under pressure in 2014/15 from competing international supplies of wheat and low corn prices.
- After peaking in 2012/13, lower corn prices reduce domestic feed use of wheat.
- Food use of wheat increases with population.

Wheat returns decline with lower prices in 2014/15



- The combination of near-record yields and record prices resulted in record wheat market receipts per acre in 2012/13.
- Record yields per harvested acre offset part of the effect of lower wheat prices in 2013/14.
- Sharply lower prices reduce returns in 2014/15. Prices may fall to levels that trigger benefits to PLC participants.

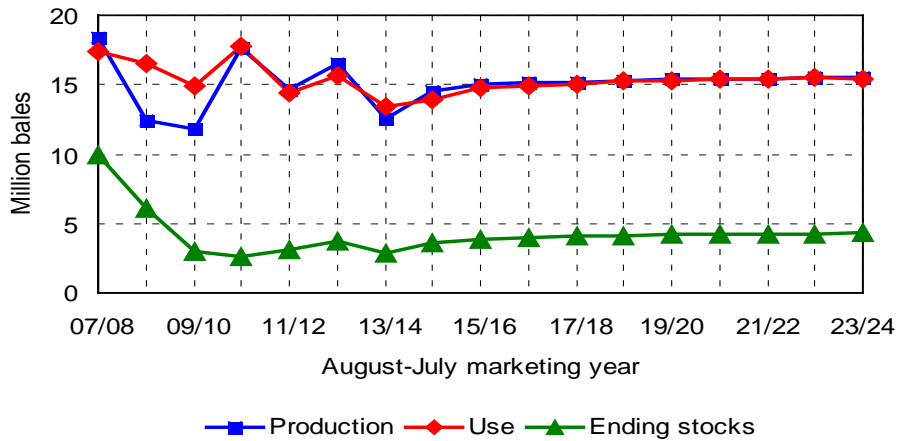
## Wheat supply and use

June-May year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>	(Million acres)										
Planted area	56.2	57.0	57.0	56.5	56.7	56.6	56.4	56.2	56.2	56.1	56.2
Harvested area	45.2	48.1	48.3	47.9	47.9	47.7	47.5	47.4	47.3	47.3	47.3
<b>Yield</b>	(Bushels per harvested acre)										
	47.2	45.7	46.0	46.4	46.8	47.1	47.4	47.8	48.1	48.4	48.7
<b>Supply</b>	(Million bushels)										
Beginning stocks	3,007	2,964	3,040	3,067	3,096	3,110	3,123	3,136	3,150	3,168	3,187
Production	718	611	666	697	703	711	719	720	723	726	732
Imports	2,130	2,203	2,225	2,222	2,245	2,251	2,256	2,266	2,278	2,292	2,305
	160	150	148	148	148	148	148	149	149	150	150
<b>Domestic use</b>	1,277	1,229	1,245	1,256	1,267	1,278	1,291	1,299	1,306	1,313	1,319
Feed and residual	252	196	203	207	210	213	218	218	218	217	216
Seed	74	75	74	75	75	75	75	75	75	75	75
Food and other	950	958	967	975	983	991	998	1,006	1,013	1,021	1,028
<b>Exports</b>	1,120	1,069	1,098	1,108	1,118	1,113	1,112	1,114	1,118	1,123	1,134
<b>Total use</b>	2,397	2,298	2,343	2,364	2,385	2,391	2,403	2,413	2,424	2,436	2,453
<b>Ending stocks</b>	611	666	697	703	711	719	720	723	726	732	734
CCC inventory	0	0	0	0	0	0	0	0	0	0	0
Under loan	12	27	32	32	33	34	35	35	35	36	36
Other stocks	599	639	665	670	678	685	686	688	691	696	698
<b>Prices, program provisions</b>	(Dollars per bushel)										
Farm price	6.82	5.55	5.37	5.32	5.31	5.28	5.26	5.25	5.23	5.23	5.21
Loan rate	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
Target/reference price	4.17	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
Direct payment rate	0.52	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Base area + allocated generic</b>	(Million acres)										
	73.8	75.9	76.0	76.0	76.0	76.0	76.0	76.0	76.0	76.1	76.1
<b>PLC participation rate</b>	(Percent)										
	n.a.	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
<b>ARC participation rate</b>	n.a.	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
<b>Returns and payments</b>	(Dollars)										
Gross market revenue/a.	321.60	253.17	245.82	246.03	247.75	247.71	248.08	249.70	250.87	252.37	252.72
Variable expenses/a.	130.32	123.77	122.34	123.13	124.99	127.09	128.97	131.76	135.48	137.92	140.07
Market net return/a.	191.28	129.40	123.49	122.90	122.76	120.61	119.11	117.93	115.40	114.45	112.65
Marketing loan benefits/a.*	0.00	0.03	0.39	0.71	0.63	0.73	0.71	0.52	0.65	0.77	0.86
DCP payments/base a.*	13.56	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ACRE/planted a.*	0.02	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Payments to participants</b>	(Dollars)										
PLC/base a.*	n.a.	10.24	17.11	17.28	17.93	18.79	19.88	19.99	19.74	20.93	20.38
ARC/base a.*	n.a.	10.10	11.26	11.33	9.21	7.30	6.60	6.68	6.74	7.05	7.09
Insurance net indemnities/a.*	26.69	14.29	14.30	14.29	14.33	14.45	14.51	14.53	14.69	14.85	15.14

\*Marketing loan benefits, DCP payments, ACRE payments and insurance net indemnities are averaged across all acres. PLC and ARC payments are per participating acre. All projections are averages across 500 stochastic outcomes.

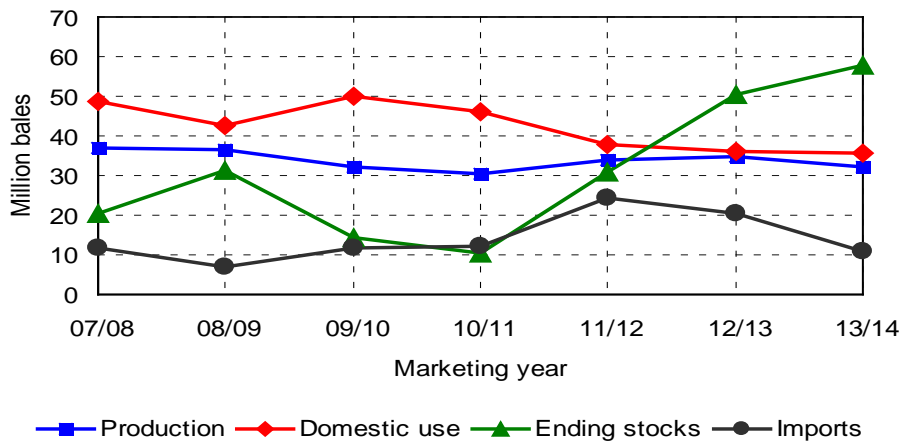
# Upland cotton

Cotton acreage, production recover in 2014



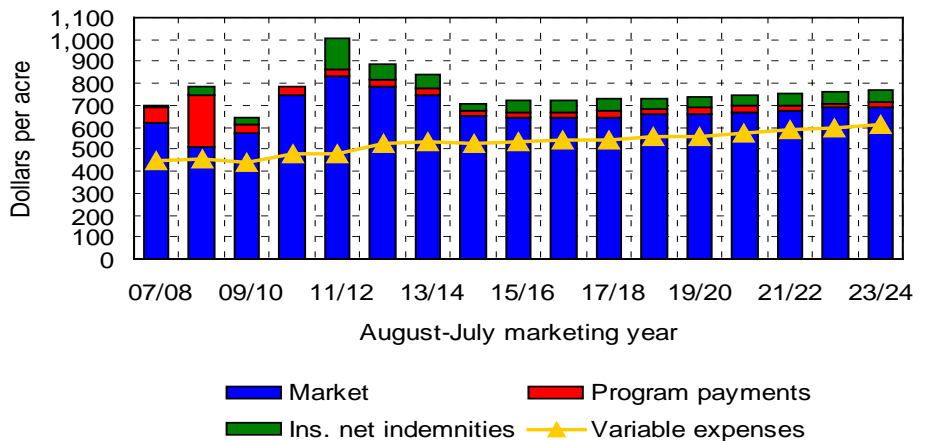
- Upland cotton production fell sharply in 2013, as planted area declined and continued drought again resulted in large abandonment.
- If growing conditions improve, more acres may be planted and fewer abandoned in 2014/15.
- The resulting increase in production would weigh on prices.

China's cotton stocks remain a source of uncertainty



- China has been the main source of uncertainty in world cotton markets.
- Policy choices have led to a very large increase in Chinese cotton stocks, which are now greater than annual production or use of cotton in China.
- Policy changes in China, especially if unanticipated, could have large impacts on world cotton trade and prices.

Cotton returns decline with lower prices



- After peaking in 2011/12, average cotton returns per acre are projected to decline for the third straight year in 2014/15 because of lower cotton prices.
- The new farm bill eliminates the DCP and ACRE programs and does not extend the new PLC and ARC programs to cotton.
- Instead, the STAX program will provide a new crop insurance option for cotton producers beginning in 2015/16.

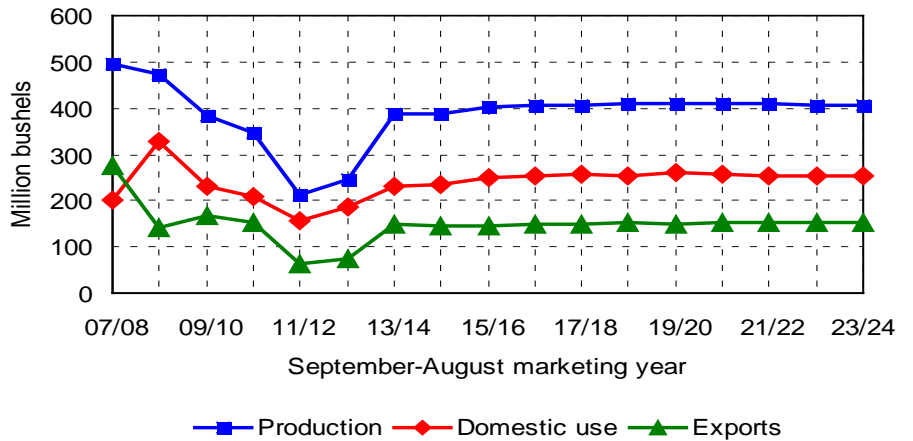
## Upland cotton supply and use

August-July year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>	(Million acres)										
Planted area	10.21	10.46	10.69	10.70	10.57	10.57	10.57	10.49	10.37	10.36	10.30
Harvested area	7.47	8.74	8.95	8.97	8.85	8.85	8.86	8.79	8.68	8.67	8.62
<b>Yield</b>	(Pounds per harvested acre)										
	807	794	801	809	817	825	833	841	847	855	863
<b>Supply</b>	(Million bales)										
Beginning stocks	16.26	17.41	18.53	18.94	19.09	19.30	19.47	19.63	19.62	19.70	19.75
Production	3.71	2.89	3.55	3.79	3.98	4.05	4.05	4.18	4.25	4.21	4.20
Imports	12.55	14.51	14.97	15.15	15.10	15.25	15.41	15.45	15.36	15.49	15.54
	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>Domestic mill use</b>	3.59	3.72	3.81	3.87	3.90	3.90	3.89	3.87	3.83	3.78	3.74
<b>Exports</b>	9.78	10.13	10.93	11.10	11.14	11.34	11.41	11.52	11.58	11.72	11.71
<b>Total use</b>	13.37	13.86	14.74	14.96	15.04	15.25	15.30	15.39	15.40	15.50	15.45
<b>Ending stocks</b>	2.89	3.55	3.79	3.98	4.05	4.05	4.18	4.25	4.21	4.20	4.31
CCC inventory	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other stocks	2.89	3.55	3.79	3.98	4.05	4.05	4.18	4.25	4.21	4.20	4.31
<b>Prices, program provisions</b>	(Cents per pound)										
Farm price	74.2	67.3	66.4	65.7	65.7	66.1	65.9	65.8	66.5	67.2	66.7
Adjusted world price	65.1	56.0	55.2	54.3	54.4	55.1	55.0	54.9	56.0	57.2	56.5
Loan rate	52.0	52.0	51.9	50.9	50.6	50.2	50.4	50.4	50.4	50.6	51.0
Target price	71.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Direct payment rate	6.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	(Dollars per ton)										
Cottonseed price	247.46	199.82	193.50	191.13	191.86	193.66	194.49	194.60	194.72	192.92	191.47
	(Million acres)										
Base area + allocated generic	17.91	17.92	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Returns and payments</b>	(Dollars)										
Gross market revenue/a.	745.01	648.29	642.79	640.60	646.79	657.81	662.95	667.35	679.54	689.46	690.66
Variable expenses/a.	535.21	529.11	530.73	538.69	545.68	554.35	561.29	573.56	590.56	600.62	609.69
Market net return/a.	209.80	119.18	112.07	101.91	101.11	103.47	101.66	93.79	88.97	88.84	80.97
Marketing loan benefits/a.*	0.00	26.17	27.29	30.70	31.59	25.74	27.72	29.63	19.63	16.55	21.97
DCP payments/base a.*	30.95	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ACRE/planted a.*	0.18	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Transition payments/base a.*	n.a.	32.14	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Insurance net indemnities/a.	61.64	33.21	52.91	51.74	51.25	51.03	51.77	52.25	52.73	54.09	54.94

\*Marketing loan benefits, DCP payments, ACRE payments and insurance net indemnities are averaged across all acres.  
All projections are averages across 500 stochastic outcomes.

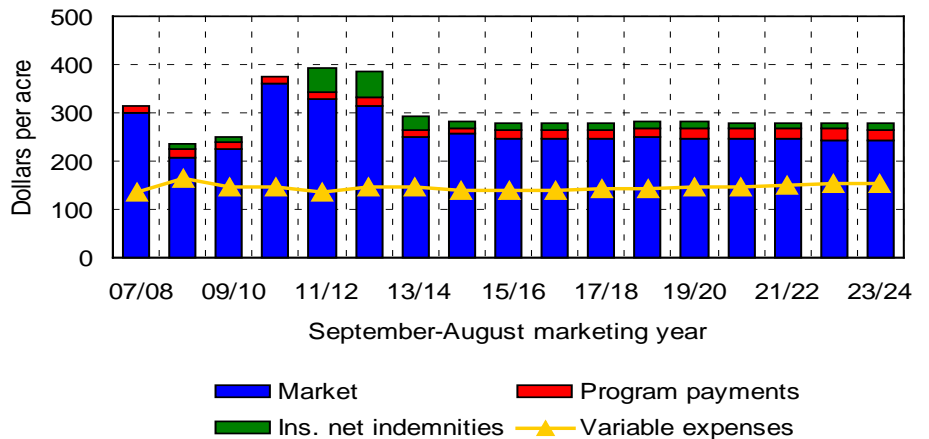
# Sorghum and barley

Sorghum production and exports recover in 2013/14



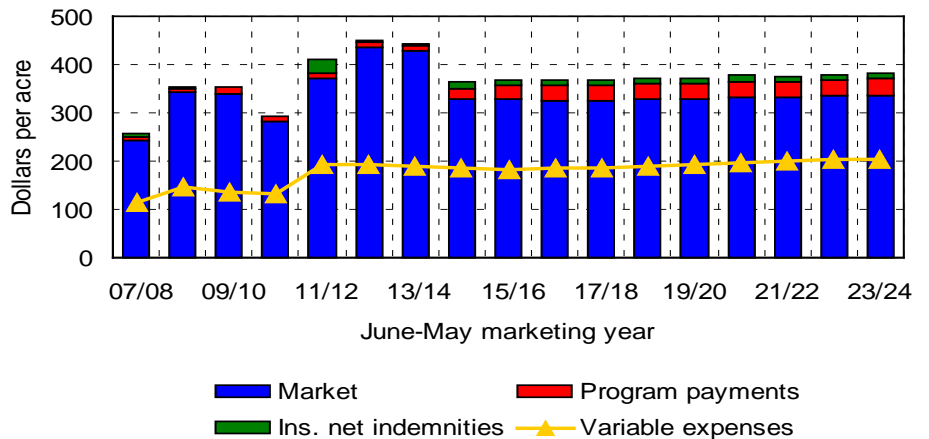
- U.S. average sorghum area and yields both increased in 2013, resulting in the largest sorghum crop since 2008.
- Large increases in global supplies of corn and other grains also contributed to a sharp reduction in sorghum prices in 2013/14.
- Sorghum production is projected to average about 400 million bushels each year, with prices following corn prices.

Sorghum returns fall with lower prices



- Season-average prices for sorghum, barley and oats all reached record levels in 2012/13.
- Increased yields only partially offset the decline in market prices in 2013/14, resulting in a significant decline in per-acre returns.
- Projected average sorghum prices are near or below the levels that trigger PLC payments.

Barley returns also decline with lower prices



- Unlike corn and sorghum, barley prices have dipped only slightly in 2013/14 from the record levels of 2012/13.
- Competition from other crops is projected to sharply reduce barley prices and returns in 2014/15.
- Projected barley prices exceed corn prices on a per-bushel basis, and average about 85% of projected wheat prices.
- Projected average barley prices are below the barley reference price.

## Sorghum supply and use

September-August year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>	(Million acres)										
Planted area	8.06	7.60	7.90	7.92	7.90	7.92	7.90	7.85	7.82	7.79	7.75
Harvested area	6.53	5.97	6.20	6.21	6.19	6.21	6.20	6.16	6.13	6.11	6.07
<b>Yield</b>	(Bushels per harvested acre)										
	59.6	64.6	64.8	65.2	65.4	65.7	66.1	66.2	66.4	66.4	66.4
<b>Supply and use</b>	(Million bushels)										
Production	389	387	403	406	407	409	411	409	409	407	405
Imports	0	0	0	0	0	0	0	0	0	0	0
Domestic use	231	233	251	255	258	255	260	256	255	254	252
Exports	150	145	146	150	148	154	149	152	153	152	152
Ending stocks	23	32	37	39	40	41	43	44	45	46	48
<b>Prices, returns and payments</b>	(Dollars)										
Farm price/bu.	4.19	4.03	3.85	3.84	3.84	3.85	3.79	3.77	3.74	3.73	3.69
Market net return/a.	103.67	116.52	107.79	107.11	105.94	106.42	102.46	98.62	94.77	91.18	86.75
Marketing loan benefits/a.*	0.00	0.00	0.04	0.24	0.09	0.33	0.19	0.25	0.12	0.20	0.54
Payments to participants											
PLC/base a.*	n.a.	13.92	20.20	21.42	21.73	20.84	22.74	23.63	24.09	25.55	26.54
ARC/base a.*	n.a.	10.20	11.21	8.23	5.92	5.22	6.70	6.81	6.99	7.43	7.63
Insurance net indemnities/a.*	28.09	12.80	13.42	12.56	12.89	13.53	13.83	13.70	13.67	13.63	13.61

\*Marketing loan benefits and insurance net indemnities are averaged across all acres. PLC and ARC payments are per participating acre. All projections are averages across 500 stochastic outcomes.

## Barley supply and use

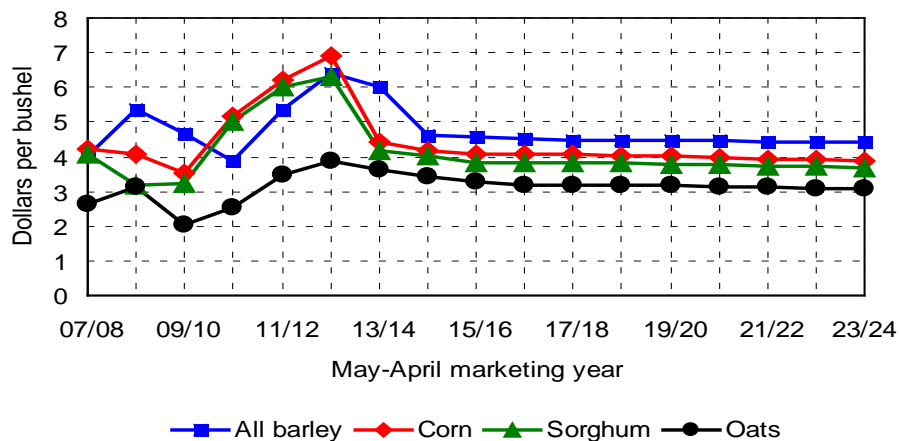
June-May year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>	(Million acres)										
Planted area	3.48	3.57	3.41	3.44	3.41	3.39	3.37	3.34	3.34	3.32	3.30
Harvested area	3.00	3.10	2.96	2.99	2.96	2.94	2.93	2.90	2.90	2.88	2.86
<b>Yield</b>	(Bushels per harvested acre)										
	71.7	71.3	72.1	72.6	73.3	73.9	74.4	75.0	75.6	76.2	76.7
<b>Supply and use</b>	(Million bushels)										
Production	215	222	214	218	217	218	218	218	219	220	220
Imports	24	19	19	19	17	17	17	17	16	16	15
Domestic use	219	221	218	220	220	219	220	219	220	219	218
Exports	10	14	13	14	15	15	15	15	15	16	16
Ending stocks	91	97	99	102	102	103	104	105	105	106	107
<b>Prices, returns and payments</b>	(Dollars)										
All barley farm price/bu.	6.00	4.64	4.59	4.52	4.48	4.48	4.46	4.46	4.43	4.43	4.41
Feed barley price/bu.	4.23	3.62	3.56	3.52	3.50	3.49	3.47	3.45	3.42	3.41	3.38
Market net return/a.	239.82	143.46	145.72	141.25	139.83	139.54	138.04	137.68	133.27	132.99	131.77
Marketing loan benefits/a.*	0.00	0.09	0.29	0.70	0.61	0.99	0.85	1.31	0.85	1.01	1.34
Payments to participants											
PLC/base a.*	n.a.	24.26	28.91	33.46	32.58	33.47	33.88	34.94	34.95	35.55	36.40
ARC/base a.*	n.a.	9.06	11.12	12.18	11.85	9.60	8.71	9.28	9.52	9.68	9.81
Insurance net indemnities/a.*	3.47	11.42	11.04	10.87	10.61	10.73	10.78	10.83	10.95	10.94	11.03

\*Marketing loan benefits and insurance net indemnities are averaged across all acres. PLC and ARC payments are per participating acre. All projections are averages across 500 stochastic outcomes.



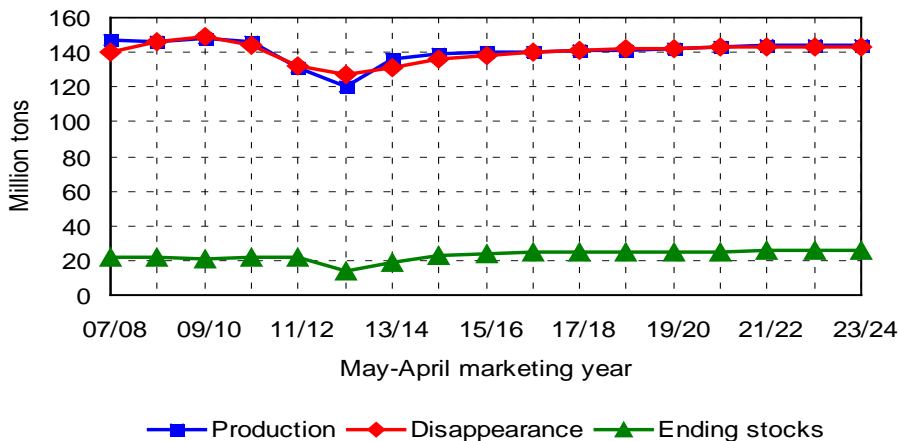
# Oats and hay

Feed grain prices decline sharply from 2012/13 peak



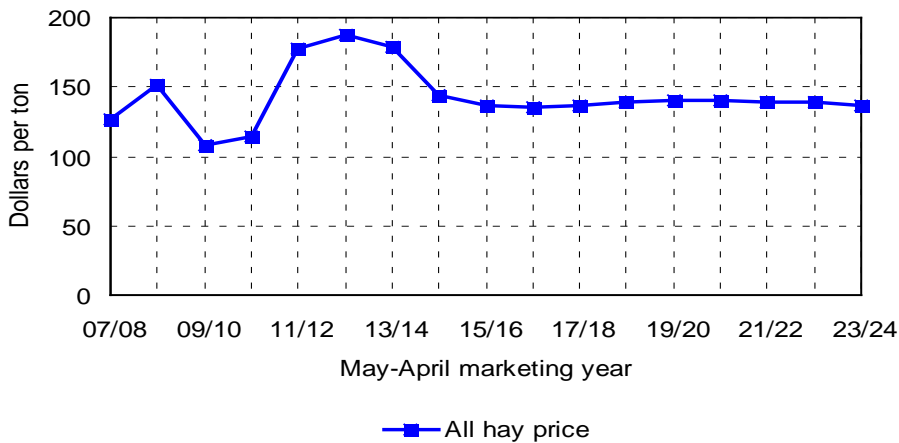
- Reduced imports and total supplies have helped keep oats prices from falling as much in 2013/14 as prices for corn and sorghum.
- In the baseline, prices of all the major coarse grains move together and average well below the 2012/13 peak values.

Hay production and stocks recover



- Hay yields and production increased in 2013 after the drought-reduced hay crop of 2012.
- With average growing conditions, hay production could increase again in 2014.
- Increased production in 2013 and 2014 allows stocks to rebuild.
- Local supplies could still be very tight in parts of the country affected by drought.

Hay prices decline with increased production



- Hay prices have begun to decline from the very high levels caused by the 2012 drought.
- If production and stocks rebuild as projected, national average hay prices could drop to around \$140 per ton beginning in 2014/15.
- Hay markets are particularly fragmented, so national average prices may not reflect local conditions.

## Oats supply and use

June-May year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>	(Million acres)										
Planted area	3.01	2.99	3.09	3.05	2.98	2.97	2.95	2.92	2.90	2.89	2.86
Harvested area	1.03	1.17	1.21	1.19	1.17	1.16	1.15	1.14	1.14	1.13	1.13
<b>Yield</b>	(Bushels per harvested acre)										
	64.0	64.4	65.1	65.6	66.2	66.7	67.3	67.9	68.3	68.9	69.4
<b>Supply and use</b>	(Million bushels)										
Production	66	76	79	79	78	78	78	78	78	79	79
Imports	94	97	94	93	93	92	92	91	90	90	89
Domestic use	162	162	167	168	168	168	167	166	166	165	165
Exports	2	2	2	2	2	2	2	2	2	2	2
Ending stocks	32	41	46	48	48	49	49	50	51	52	53
<b>Prices, returns and payments</b>	(Dollars)										
Farm price/bu.	3.62	3.44	3.27	3.20	3.19	3.17	3.16	3.14	3.12	3.10	3.07
Market net return/a.	111.77	104.43	96.86	93.41	93.64	92.11	91.60	90.43	87.42	85.48	83.50
Marketing loan benefits/a.*	0.00	0.00	0.00	0.00	0.00	0.02	0.03	0.04	0.00	0.01	0.08
Payments to participants											
PLC/base a.*	n.a.	0.12	0.95	1.45	1.78	1.58	1.62	2.09	1.97	2.04	2.34
ARC/base a.*	n.a.	0.70	1.44	1.53	1.97	1.70	1.74	1.65	1.76	1.63	1.74
Insurance net indemnities/a.*	0.61	1.58	2.29	2.21	2.19	2.24	2.24	2.25	2.26	2.28	2.28

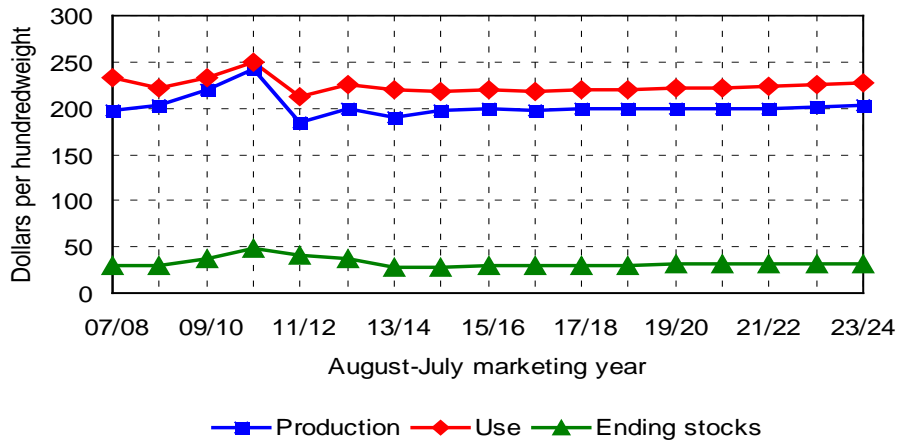
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## Hay supply and use

May-April year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Harvested area</b>	(Million acres)										
	58.3	59.1	59.1	59.1	59.2	59.3	59.5	59.6	59.6	59.5	59.4
<b>Yield</b>	(Tons per acre)										
	2.33	2.36	2.37	2.38	2.38	2.39	2.39	2.40	2.41	2.42	2.42
<b>Supply and use</b>	(Million tons)										
Production	135.9	139.6	140.0	140.4	141.0	141.6	142.5	143.2	143.7	143.8	143.9
Disappearance	131.1	136.1	138.2	139.9	140.9	141.7	142.4	143.1	143.4	143.4	143.4
Ending stocks	19.0	22.5	24.3	24.8	24.9	24.8	24.9	25.0	25.4	25.7	26.2
<b>All hay farm price</b>	(Dollars per ton)										
	179.06	143.92	136.83	135.66	136.84	139.09	140.72	140.75	139.70	138.65	137.17

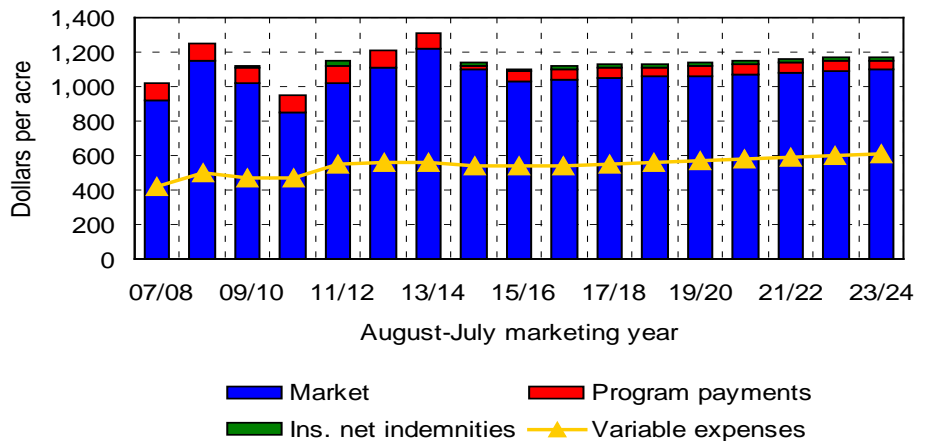
# Rice and sugar

Rice stocks decline in 2013/14



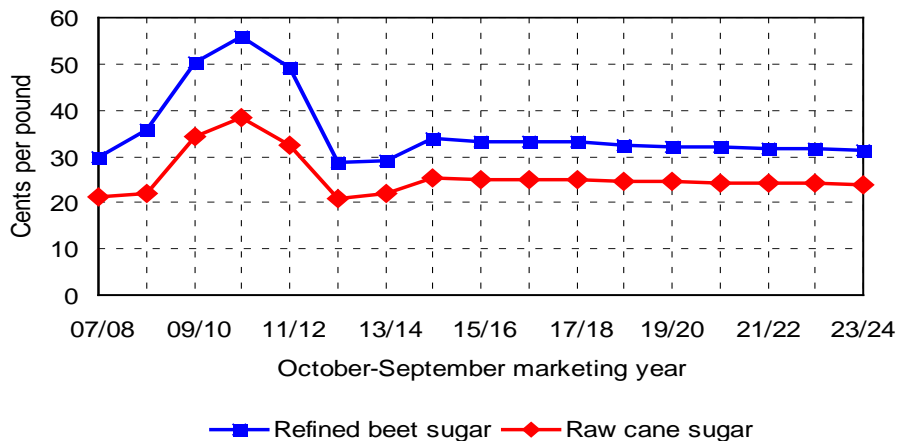
- Rice production declined in 2013 as rice area fell to the lowest level since 1987.
- The resulting drawdown of rice stocks has contributed to higher U.S. rice prices in the 2013/14 marketing year.
- Concerns about drought in California and other factors have pushed prices even higher since these estimates were prepared.
- Projected U.S. rice prices fall in 2014/15 and 2015/16, bringing U.S. prices more in line with those of other rice exporters.

Rice returns peak in 2013/14, then decline



- High prices and yields result in record levels of per-acre revenues for U.S. rice producers in 2013/14.
- The projected declines in rice prices in 2014/15 and 2015/16 reduce producer returns.
- Projected average rice prices drop below the levels that trigger PLC payments.

Sugar prices remain low in 2013/14



- Large sugar supplies in the U.S. and Mexico contributed to a sharp decline in sugar prices in the 2012/13 marketing year.
- Sugar prices remain well below 2009-2011 levels in 2013/14, but projected stocks decline slightly.
- Reduced production allows some price recovery in 2014/15. Average sugar prices remain above loan rates, but prices could fall to support levels in years with big crops or large imports from Mexico.

## Rice supply and use

August-July year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b> (Million acres)											
Planted area	2.49	2.68	2.69	2.62	2.62	2.60	2.59	2.57	2.56	2.56	2.55
Harvested area	2.47	2.64	2.65	2.59	2.59	2.57	2.56	2.54	2.53	2.53	2.52
<b>Yield</b> (Pounds per harvested acre)											
Yield	7,694	7,461	7,526	7,602	7,669	7,727	7,778	7,837	7,898	7,965	8,027
<b>Supply and use</b> (Million hundredweight)											
Production	189.9	197.3	199.8	196.9	198.8	198.6	198.8	199.2	199.7	201.2	202.6
Imports	21.0	20.8	20.7	21.3	21.8	22.4	22.9	23.5	23.9	24.2	24.6
Domestic use	119.9	120.9	123.0	124.1	125.4	126.7	127.9	129.2	130.3	131.6	132.7
Exports	99.1	97.6	96.0	93.8	94.7	93.8	93.5	93.3	93.0	93.4	93.9
Ending stocks	28.3	27.9	29.4	29.6	30.1	30.6	30.8	31.1	31.4	31.8	32.4
<b>Prices, returns and payments</b> (Dollars)											
Farm price/cwt.	15.82	14.81	13.67	13.73	13.70	13.67	13.68	13.69	13.72	13.72	13.66
Market net return/a.	660.06	563.42	491.84	502.88	503.37	498.79	497.96	494.55	490.61	490.91	486.39
Marketing loan benefits/a.*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DCP payments/base a.*	88.16	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Payments to participants</b>											
PLC/base a.*	n.a.	21.64	61.97	59.54	61.52	63.06	63.55	64.39	62.60	63.80	65.35
ARC/base a.*	n.a.	1.30	8.97	10.08	11.40	10.47	7.20	7.02	6.18	6.96	6.66
Insurance net indemnities/a.*	7.88	13.58	19.05	18.10	18.39	18.48	18.46	18.63	18.80	18.96	19.10

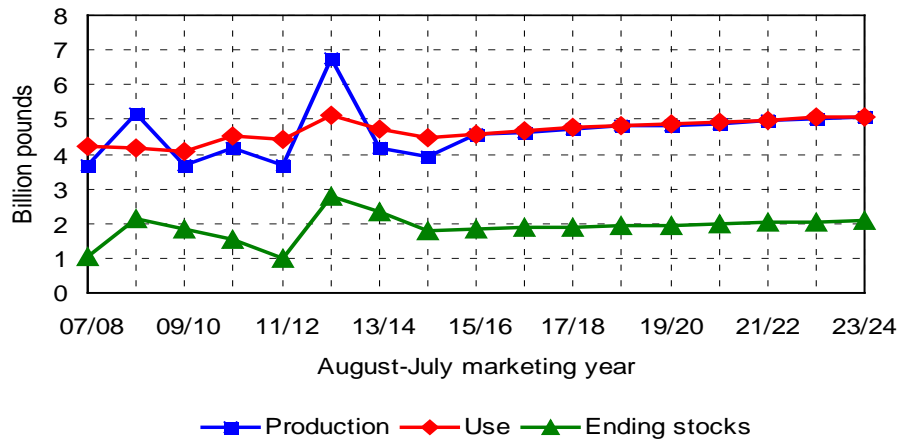
\*Marketing loan benefits, DCP payments, and insurance net indemnities are averaged across all acres. PLC and ARC payments are per participating acre. All projections are averages across 500 stochastic outcomes.

## Sugar supply and use

October-September year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b> (Million acres)											
Sugar cane harvested	0.857	0.848	0.867	0.877	0.883	0.884	0.884	0.881	0.877	0.872	0.867
Sugar beet planted	1.198	1.145	1.220	1.222	1.225	1.225	1.221	1.218	1.213	1.209	1.208
Sugar beet harvested	1.154	1.116	1.189	1.191	1.195	1.194	1.191	1.188	1.183	1.179	1.178
<b>Yield</b> (Tons per harvested acre)											
Cane sugar	4.38	4.29	4.31	4.34	4.36	4.38	4.40	4.42	4.44	4.45	4.46
Beet sugar	4.35	4.29	4.37	4.45	4.52	4.60	4.67	4.75	4.82	4.89	4.96
<b>Supply and use</b> (Thousand tons)											
Production	8,778	8,420	8,937	9,100	9,245	9,361	9,457	9,539	9,585	9,643	9,706
Cane sugar	3,753	3,636	3,738	3,801	3,844	3,872	3,891	3,895	3,889	3,877	3,866
Beet sugar	5,025	4,784	5,198	5,298	5,401	5,489	5,566	5,643	5,696	5,765	5,840
Imports	3,331	3,536	3,532	3,525	3,549	3,585	3,625	3,674	3,744	3,803	3,862
Domestic use	12,095	11,899	12,143	12,349	12,523	12,667	12,809	12,942	13,065	13,182	13,295
Exports	258	255	256	256	256	256	256	256	256	256	255
Ending stocks	1,916	1,718	1,788	1,808	1,824	1,847	1,864	1,879	1,887	1,896	1,914
<b>Prices</b> (Cents per pound)											
N.Y. spot raw sugar	21.82	25.49	24.97	24.96	24.97	24.69	24.46	24.34	24.22	24.11	23.85
Refined beet sugar	28.91	33.95	33.17	33.09	33.05	32.59	32.22	32.00	31.76	31.56	31.13

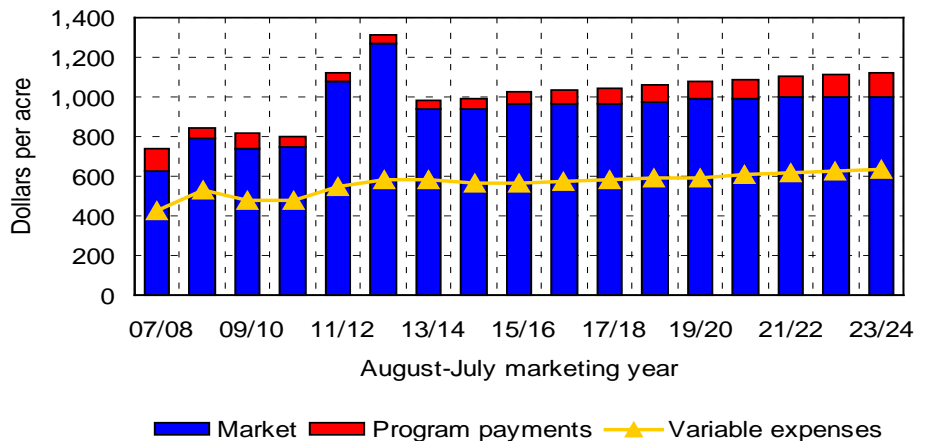
# Peanuts and sunflower seed

Reduced production draws down peanut stocks



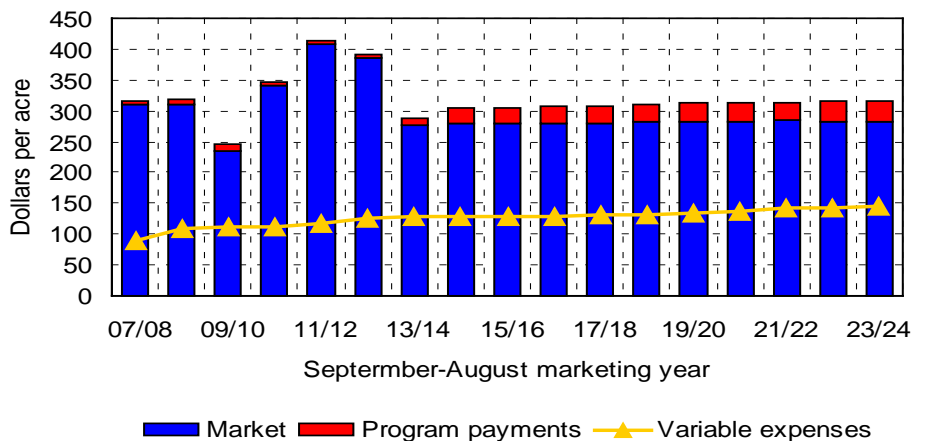
- After the record crop of 2012, producers sharply reduced peanut area and production in 2013.
- Peanut yields were above the long term trend for the second straight year in 2013. If yields drop in 2014, peanut production could decline again.
- Reduced peanut production allows a drawdown of peanut stocks, setting the stage for a recovery in peanut prices.

Peanut revenues fall sharply from 2012/13 peak



- High contract prices and record yields resulted in record per-acre market revenues for the 2012 peanut crop.
- With lower projected prices in 2013/14 and a return to more normal yields, per-acre revenues decline sharply.
- Projected average peanut prices are low enough to trigger PLC payments.

Sunflower returns also decline with lower prices



- Sunflower seed prices decline in 2013/14 in response to larger global oilseed supplies and lower vegetable oil prices.
- In 2014/15, a further decline in sunflower seed prices is offset by an assumed recovery in average yields, so returns are largely unchanged.
- Projected average sunflower seed prices are low enough to trigger PLC payments.

## Peanut supply and use

August-July year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>											
	(Million acres)										
Planted area	1.07	1.11	1.26	1.27	1.28	1.27	1.26	1.26	1.26	1.25	1.25
Harvested area	1.04	1.07	1.22	1.23	1.24	1.23	1.22	1.22	1.22	1.21	1.21
<b>Yield</b>											
	(Pounds per harvested acre)										
	4,006	3,658	3,713	3,773	3,826	3,891	3,949	4,007	4,071	4,124	4,179
<b>Supply and use</b>											
	(Million pounds)										
Production	4,174	3,920	4,553	4,634	4,732	4,798	4,822	4,885	4,958	5,009	5,054
Imports	65	65	65	65	65	65	65	65	65	65	65
Domestic use	3,932	3,829	3,949	4,016	4,088	4,151	4,199	4,243	4,302	4,351	4,393
Exports	765	660	643	648	667	678	672	680	687	694	697
Ending stocks	2,313	1,809	1,834	1,869	1,912	1,945	1,962	1,989	2,022	2,051	2,080
<b>Prices, returns and payments</b>											
	(Dollars)										
Farm price/ton	469.54	519.88	523.88	517.68	510.18	505.73	505.11	500.30	494.37	489.62	483.11
Market net return/a.	359.83	375.93	397.43	395.89	388.55	386.92	392.42	385.48	376.90	374.36	366.08
Marketing loan benefits/a.*	0.00	2.55	7.92	7.06	14.99	15.14	20.21	23.75	29.96	33.54	38.30
DCP payments/base a.*	42.11	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Payments to participants											
PLC/base a.*	n.a.	50.14	53.64	59.65	67.68	72.03	72.95	76.65	85.12	86.09	92.62
ARC/base a.*	n.a.	11.43	17.95	25.16	24.74	19.51	18.26	19.51	22.26	23.32	25.55

\*Marketing loan benefits, DCP payments, and insurance net indemnities are averaged across all acres. PLC and ARC payments are per participating acre. All projections are averages across 500 stochastic outcomes.

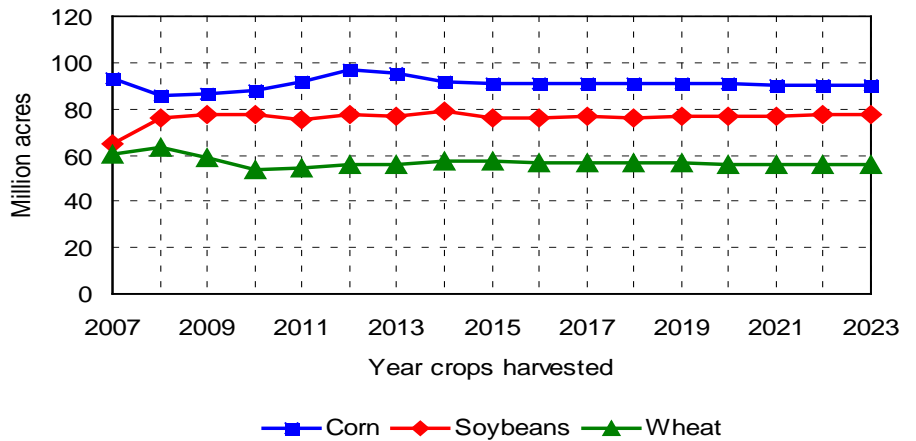
## Sunflower seed supply and use

September-August year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Area</b>											
	(Million acres)										
Planted area	1.58	1.49	1.65	1.69	1.71	1.72	1.73	1.74	1.75	1.76	1.77
Harvested area	1.47	1.40	1.55	1.59	1.62	1.62	1.64	1.64	1.65	1.66	1.67
<b>Yield</b>											
	(Pounds per harvested acre)										
	1,378	1,547	1,551	1,560	1,570	1,575	1,583	1,591	1,598	1,601	1,609
<b>Supply and use</b>											
	(Million pounds)										
Production	2,033	2,175	2,412	2,489	2,544	2,562	2,595	2,622	2,646	2,664	2,688
Imports	117	117	117	117	117	117	117	117	117	117	117
Domestic use	2,088	2,141	2,252	2,320	2,377	2,409	2,449	2,483	2,511	2,537	2,568
Exports	236	104	247	275	277	267	258	249	245	238	231
Ending stocks	164	211	242	253	260	263	268	274	281	286	291
<b>Prices, returns and payments</b>											
	(Dollars)										
Farm price/lb.	0.200	0.182	0.181	0.180	0.179	0.180	0.179	0.179	0.179	0.177	0.177
Market net return/a.	146.66	152.20	151.63	150.60	148.76	149.85	146.93	144.45	142.59	137.85	137.69
Marketing loan benefits/a.*	0.00	0.26	0.28	0.10	0.41	0.77	1.14	1.39	1.05	1.95	0.80
Payments to participants											
PLC/base a.*	n.a.	26.51	28.20	29.50	31.48	30.82	31.81	31.65	31.57	33.57	33.70
ARC/base a.*	n.a.	10.47	10.39	9.16	7.59	7.05	8.43	8.32	8.21	8.79	9.05

\*Marketing loan benefits, DCP payments, and insurance net indemnities are averaged across all acres. PLC and ARC payments are per participating acre. All projections are averages across 500 stochastic outcomes.

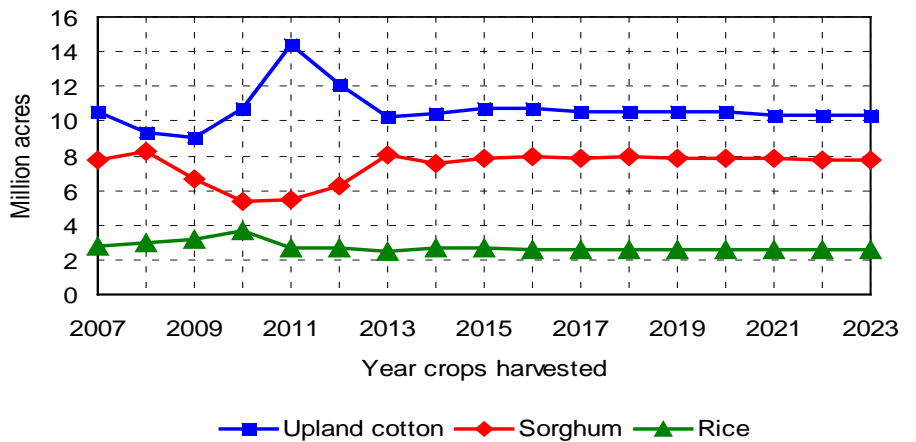
# Land use

Corn area falls in 2014, soybean area increases



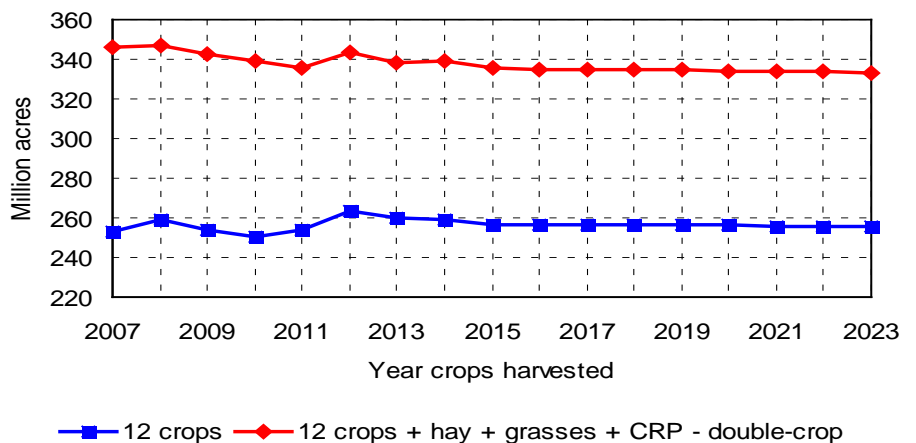
- Sharply lower corn prices lead to a reduction in corn area planted in 2014.
- Projected soybean area increases in 2014, in part because soybean prices have remained unusually strong relative to corn.
- Wheat area could increase slightly in 2014 if conditions in spring wheat states are more favorable than in 2013.
- Low prices and returns could slightly reduce the total amount of land devoted to corn and soybeans in 2015.

Cotton acreage planted increases in 2014



- Lower prices contributed to sharp reductions in cotton acreage planted in 2012 and 2013.
- Cotton acreage could increase slightly in 2014, given unfavorable expected returns for many competing crops.
- Sorghum acreage increased in 2013, and only a slight drop is projected for 2014.
- Strong rice prices relative to other crops results in some recovery in rice area from the 2013 low.

12-crop planted area remains nearly steady in 2014



- Land planted to 12 major crops declined slightly in 2013 from the 2012 peak, in part because of adverse planting conditions.
- The 12-crop area is largely unchanged in 2014, as the effect of lower prices and returns is offset by an assumed return to more normal planting conditions.
- Lower prices result in a slight reduction in 12-crop area in 2015. However, with less land enrolled in the conservation reserve, total planted area remains above the levels of 2009-2011.

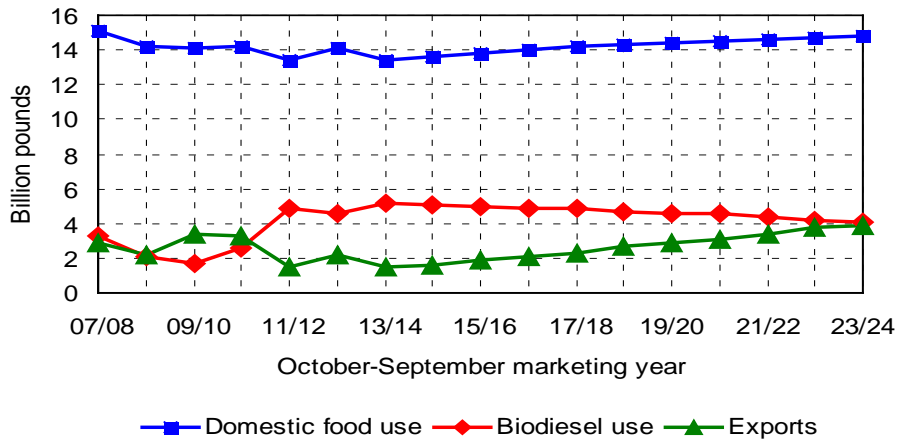
## Land use for major crops and the conservation reserve

Marketing year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>Planted area</b>	(Million acres)										
Corn	95.37	91.34	90.64	91.06	90.96	91.25	91.15	90.80	90.46	90.13	89.91
Soybeans	76.53	78.69	75.75	76.04	76.46	76.27	76.58	76.84	76.97	77.19	77.28
Wheat	56.16	57.04	57.03	56.54	56.71	56.58	56.38	56.25	56.18	56.13	56.18
Upland cotton	10.21	10.46	10.69	10.70	10.57	10.57	10.57	10.49	10.37	10.36	10.30
Sorghum	8.06	7.60	7.90	7.92	7.90	7.92	7.90	7.85	7.82	7.79	7.75
Barley	3.48	3.57	3.41	3.44	3.41	3.39	3.37	3.34	3.34	3.32	3.30
Oats	3.01	2.99	3.09	3.05	2.98	2.97	2.95	2.92	2.90	2.89	2.86
Rice	2.49	2.68	2.69	2.62	2.62	2.60	2.59	2.57	2.56	2.56	2.55
Sunflowers	1.58	1.49	1.65	1.69	1.71	1.72	1.73	1.74	1.75	1.76	1.77
Peanuts	1.07	1.11	1.26	1.27	1.28	1.27	1.26	1.26	1.26	1.25	1.25
Sugar beets	1.20	1.14	1.22	1.22	1.23	1.22	1.22	1.22	1.21	1.21	1.21
Sugar cane (harvested)	0.91	0.90	0.92	0.93	0.94	0.94	0.94	0.94	0.93	0.93	0.92
<b>12 crop planted area</b>	<b>260.05</b>	<b>259.01</b>	<b>256.25</b>	<b>256.48</b>	<b>256.77</b>	<b>256.71</b>	<b>256.64</b>	<b>256.21</b>	<b>255.75</b>	<b>255.52</b>	<b>255.28</b>
<b>Hay (harvested)</b>	<b>58.26</b>	<b>59.07</b>	<b>59.09</b>	<b>59.11</b>	<b>59.20</b>	<b>59.34</b>	<b>59.49</b>	<b>59.55</b>	<b>59.55</b>	<b>59.47</b>	<b>59.37</b>
<b>Warm season grasses (harvested)</b>	<b>0.19</b>	<b>0.22</b>	<b>0.19</b>	<b>0.19</b>	<b>0.20</b>	<b>0.21</b>	<b>0.29</b>	<b>0.47</b>	<b>0.73</b>	<b>0.99</b>	<b>1.27</b>
<b>12 crops + hay + grasses</b>	<b>318.50</b>	<b>318.29</b>	<b>315.52</b>	<b>315.77</b>	<b>316.16</b>	<b>316.25</b>	<b>316.42</b>	<b>316.24</b>	<b>316.04</b>	<b>315.98</b>	<b>315.92</b>
<b>Conservation reserve (CRP)</b>	<b>26.84</b>	<b>25.88</b>	<b>25.05</b>	<b>24.47</b>	<b>23.84</b>	<b>23.40</b>	<b>23.24</b>	<b>23.10</b>	<b>22.96</b>	<b>22.81</b>	<b>22.68</b>
<b>12 crops + hay + grasses + CRP</b>	<b>345.33</b>	<b>344.17</b>	<b>340.57</b>	<b>340.24</b>	<b>340.00</b>	<b>339.65</b>	<b>339.66</b>	<b>339.33</b>	<b>338.99</b>	<b>338.79</b>	<b>338.60</b>
<b>Double-crop soybeans</b>	<b>6.75</b>	<b>5.42</b>	<b>5.23</b>	<b>5.22</b>	<b>5.24</b>	<b>5.22</b>	<b>5.23</b>	<b>5.22</b>	<b>5.21</b>	<b>5.20</b>	<b>5.19</b>
<b>12 crops + hay + grasses + CRP - double-crop soybeans</b>	<b>338.58</b>	<b>338.75</b>	<b>335.34</b>	<b>335.02</b>	<b>334.76</b>	<b>334.43</b>	<b>334.44</b>	<b>334.11</b>	<b>333.78</b>	<b>333.59</b>	<b>333.41</b>



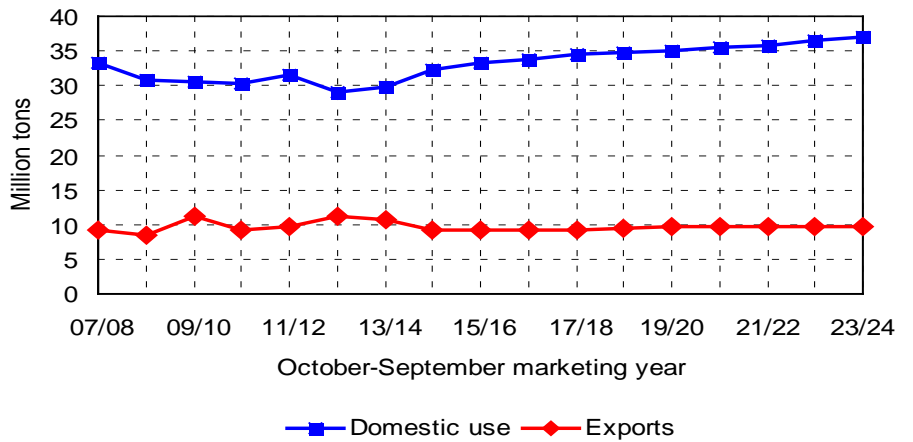
# Soybean products

Expansion in biodiesel use of soybean oil ends



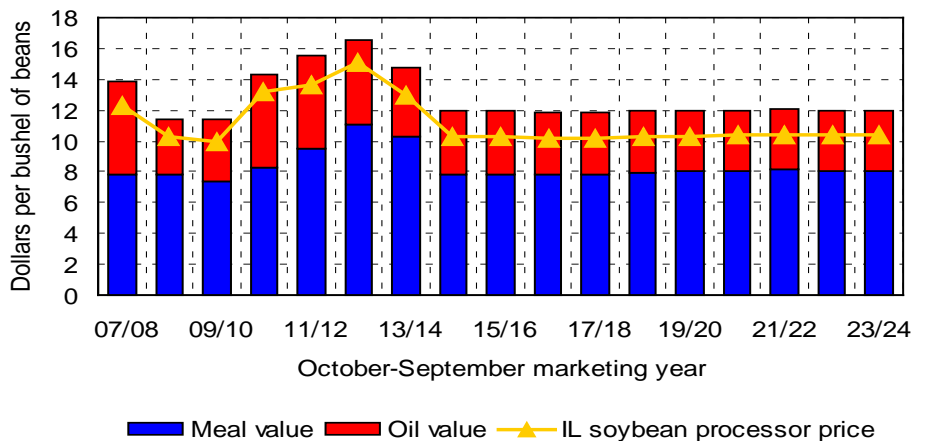
- Future biodiesel use of soybean oil is constrained by competition from corn oil and other biodiesel feedstocks.
- Food use of soybean oil increases with population after 2013/14, as recent shifts from soy oil to other vegetable oils abate.
- Continued low soybean oil prices and growth in global vegetable oil demand contribute to projected increases in U.S. soybean oil exports.

Soybean meal use grows as DDGS use stabilizes



- Stagnant livestock and poultry production and competition from distillers grains has limited domestic use of soybean meal in recent years.
- Projected increases in soybean meal use result from resumed growth in poultry production and a halt in the expansion of distillers grains use.
- Soybean meal exports remain stable as growing world demand is met by competitors.

Crushing margins hold constant with lower prices



- Soybean oil prices have declined, partly because expanding world palm oil production has depressed the prices of all vegetable oils.
- Soybean meal prices decline in 2014/15 in response to increased global supplies.
- Projected crushing margins (the difference between the value of soybean meal and soybean oil and the cost of soybeans) are fairly stable.

## Soybean oil supply and use

October-September year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
	(Million pounds)										
<b>Supply</b>	21,730	22,173	22,641	23,022	23,371	23,684	23,951	24,257	24,540	24,795	25,016
Beginning stocks	1,705	1,705	1,872	1,896	1,963	2,022	2,043	2,104	2,140	2,171	2,140
Production	19,825	20,268	20,569	20,926	21,208	21,462	21,708	21,953	22,200	22,424	22,676
Imports	200	200	200	200	200	200	200	200	200	200	200
<b>Domestic use</b>	18,583	18,715	18,817	18,931	19,019	18,974	18,991	19,012	18,960	18,921	18,821
Biodiesel	5,195	5,083	5,013	4,909	4,840	4,710	4,617	4,541	4,377	4,206	4,040
Food and other	13,388	13,632	13,804	14,022	14,179	14,264	14,374	14,472	14,583	14,715	14,781
<b>Exports</b>	1,441	1,586	1,928	2,128	2,330	2,667	2,856	3,105	3,409	3,735	3,905
<b>Total use</b>	20,024	20,301	20,745	21,059	21,349	21,641	21,847	22,117	22,369	22,656	22,726
<b>Ending stocks</b>	1,705	1,872	1,896	1,963	2,022	2,043	2,104	2,140	2,171	2,140	2,290
	(Cents per pound)										
<b>Price</b>											
Decatur	37.55	35.37	35.47	35.04	34.65	34.90	34.45	34.21	34.16	33.53	33.68

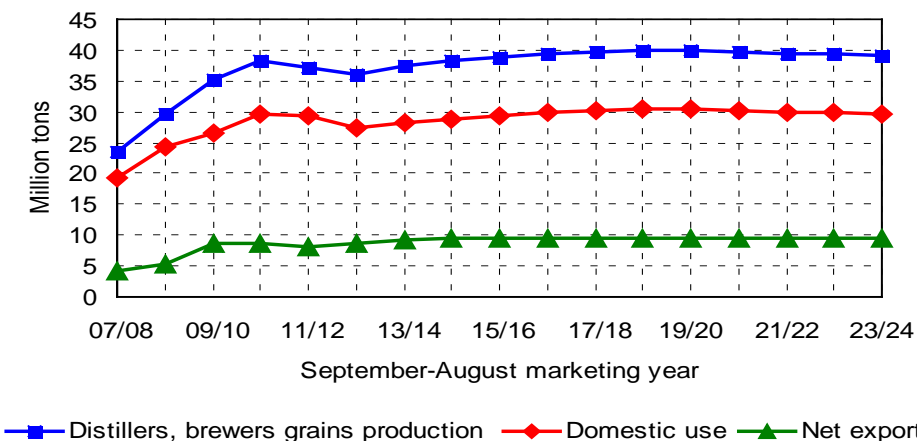
## Soybean meal supply and use

October-September year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
	(Thousand tons)										
<b>Supply</b>	40,769	42,022	42,670	43,403	43,984	44,507	45,011	45,514	46,022	46,483	47,002
Beginning stocks	275	300	330	332	334	336	336	336	338	340	341
Production	40,329	41,557	42,175	42,906	43,485	44,007	44,510	45,013	45,520	45,979	46,496
Imports	165	165	165	165	165	165	165	165	165	165	165
<b>Domestic use</b>	29,848	32,408	33,234	33,888	34,438	34,758	35,053	35,434	35,899	36,414	36,961
<b>Exports</b>	10,621	9,285	9,104	9,181	9,211	9,413	9,622	9,743	9,784	9,727	9,698
<b>Total use</b>	40,469	41,693	42,338	43,069	43,649	44,171	44,675	45,176	45,683	46,142	46,659
<b>Ending stocks</b>	300	330	332	334	336	336	336	338	340	341	343
	(Dollars per ton)										
<b>Price</b>											
Decatur, 48% protein	435.31	328.35	328.22	328.00	328.55	331.45	335.98	337.46	340.40	340.24	339.09

# Corn products

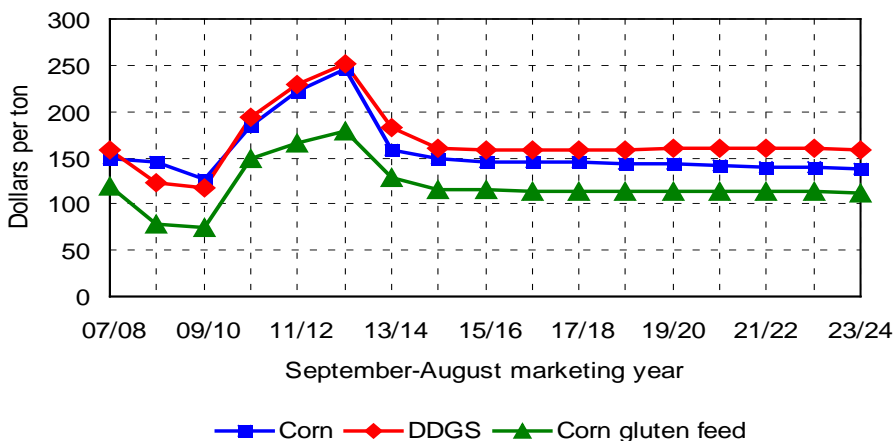
## Distillers grains expansion is largely over

- Distillers grains production and use expanded rapidly as the dry mill ethanol industry grew.
- Production dipped in 2012/13 when ethanol production declined but recovers in 2013/14.
- Almost no growth occurs after 2014/15, as corn ethanol production is relatively stable.



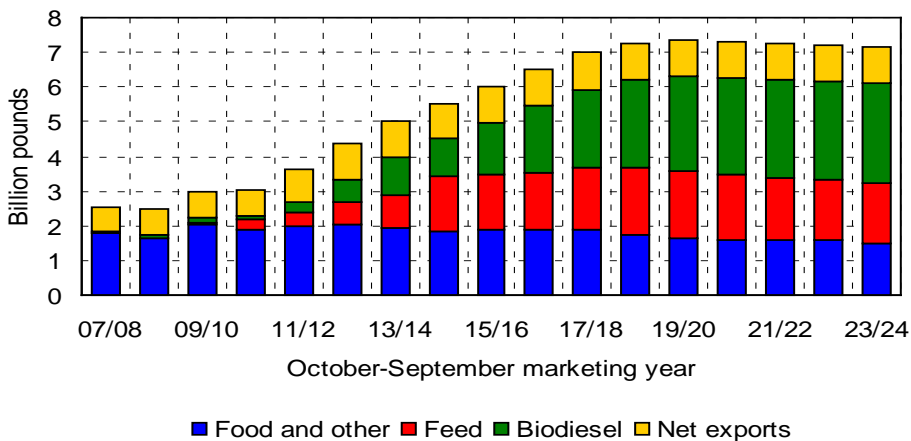
- Prices of distillers dried grains with solubles (DDGS) and corn gluten feed have generally moved with corn prices.
- Export demand has sometimes helped support DDGS prices. Projected DDGS prices slightly exceed corn prices.
- Distillers grains primarily displace corn in beef cattle rations, but displace both corn and soybean meal in other livestock and poultry rations.

## DDGS prices generally follow corn prices



## Biodiesel use of corn oil increases

- Wet mill plants produce ethanol, HFCS and other products. Food uses account for most of the corn oil produced at wet mill plants.
- The baseline projects a rapid increase in the share of dry mill ethanol plants that remove oil from distillers grains.
- The oil removed in dry mill plants is used in feed uses and biodiesel production. The share used for biodiesel production is projected to increase.



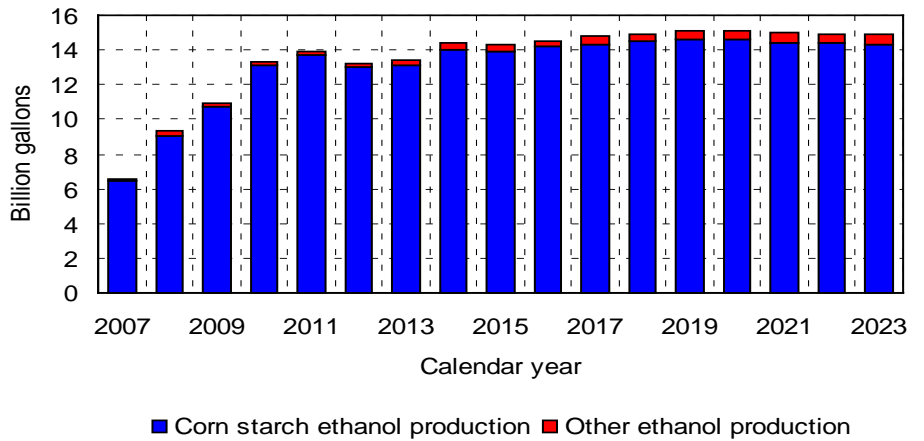
## Corn product supply and use

Marketing year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
<b>High-fructose corn syrup</b>											
	(Thousand tons, Oct.-Sep. year)										
Production	8,931	9,069	9,094	9,133	9,189	9,229	9,240	9,231	9,245	9,281	9,314
Domestic use	7,390	7,455	7,439	7,438	7,451	7,449	7,420	7,374	7,364	7,358	7,351
Net exports	1,541	1,614	1,655	1,695	1,738	1,780	1,820	1,857	1,881	1,923	1,963
	(Cents per pound, Oct.-Sep. year)										
Price, 42% Midwest	22.40	22.64	22.24	22.25	22.26	22.01	21.91	22.01	21.92	21.82	21.56
HFCS price/ref. sugar price	77%	67%	67%	67%	67%	68%	68%	69%	69%	69%	69%
<b>Distillers, brewers grains</b>											
	(Thousand tons, Sep.-Aug. year)										
Production (dry equiv.)	37,542	38,350	38,802	39,292	39,619	39,971	40,045	39,676	39,445	39,342	39,148
Domestic use	28,274	28,815	29,281	29,777	30,105	30,457	30,540	30,179	29,956	29,848	29,651
Net exports	9,268	9,536	9,521	9,515	9,514	9,514	9,505	9,497	9,490	9,494	9,497
	(Dollars per ton, Sep.-Aug. year)										
Price, IL points	183.47	159.34	158.14	158.25	158.75	158.86	159.61	159.44	159.60	159.69	158.80
DDGS price/corn price	116%	107%	108%	109%	109%	110%	111%	112%	114%	114%	115%
<b>Corn gluten feed</b>											
	(Thousand tons, Sep.-Aug. year)										
Production	8,957	8,854	8,722	8,712	8,756	8,800	8,824	8,817	8,765	8,709	8,659
Domestic use	7,885	7,773	7,665	7,675	7,739	7,799	7,843	7,856	7,825	7,793	7,763
Net exports	1,072	1,081	1,057	1,036	1,017	1,001	981	961	939	916	895
	(Dollars per ton, Sep.-Aug. year)										
Price, 21%, IL points	128.03	115.51	114.64	114.41	114.35	114.00	114.03	113.52	113.38	113.39	112.67
CGF price/corn price	81%	77%	79%	79%	79%	79%	79%	80%	81%	81%	82%
<b>Corn gluten meal</b>											
	(Thousand tons, Sep.-Aug. year)										
Production	2,357	2,330	2,295	2,293	2,304	2,316	2,322	2,320	2,306	2,292	2,279
Domestic use	1,356	1,279	1,235	1,222	1,224	1,227	1,225	1,214	1,192	1,168	1,145
Net exports	1,001	1,051	1,060	1,070	1,080	1,089	1,097	1,107	1,115	1,124	1,134
	(Dollars per ton, Sep.-Aug. year)										
Price, 60%, IL points	618.13	490.96	491.52	491.46	492.09	495.53	500.99	502.95	506.86	507.06	506.09
CGM price/soymeal price	142%	150%	150%	150%	150%	150%	149%	149%	149%	149%	149%
<b>Corn oil</b>											
	(Million pounds, Oct.-Sep. year)										
Production	5,058	5,572	6,042	6,533	7,008	7,285	7,340	7,284	7,238	7,216	7,133
Domestic use	3,972	4,496	4,977	5,463	5,936	6,225	6,287	6,237	6,191	6,164	6,089
Biodiesel	1,066	1,064	1,505	1,921	2,275	2,545	2,687	2,754	2,795	2,820	2,849
Feed	948	1,579	1,571	1,663	1,786	1,942	1,973	1,903	1,804	1,771	1,731
Food/other	1,958	1,854	1,902	1,879	1,876	1,737	1,627	1,580	1,592	1,573	1,509
Net exports	1,034	1,042	1,042	1,044	1,046	1,047	1,049	1,049	1,049	1,051	1,049
Ending stocks	218	251	274	300	325	339	343	341	338	339	333
	(Cents per pound, Oct.-Sep. year)										
Chicago price	41.42	39.17	39.29	38.86	38.38	38.54	38.07	37.86	37.87	37.30	37.63
Corn oil price/soyoil price	110%	111%	111%	111%	111%	110%	110%	111%	111%	111%	112%

# Ethanol and biofuel policies

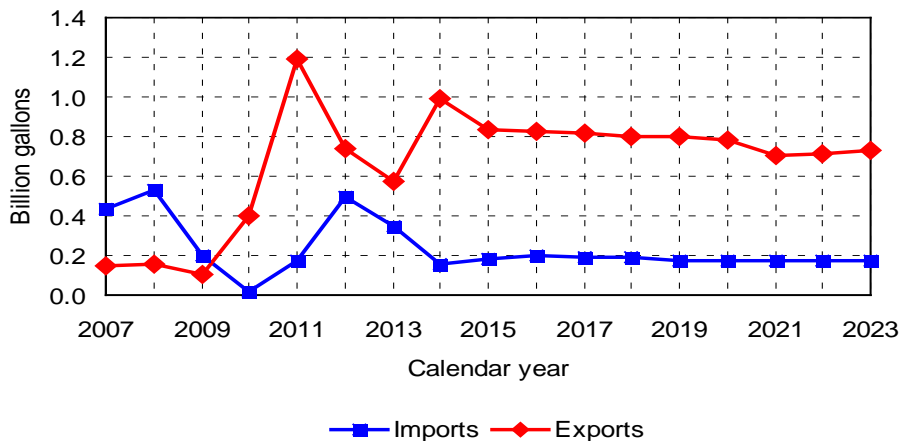
- As margins improved, a recovery in conventional ethanol production began in 2013 and it continues into 2014.
- Beyond 2014, ethanol production grows slowly as RFS requirements and export demand remain relatively flat.
- Cellulosic and non-corn ethanol production levels remain an uncertainty. Projections for cellulosic biofuel continue to be well below EISA levels.

Slow growth in ethanol production



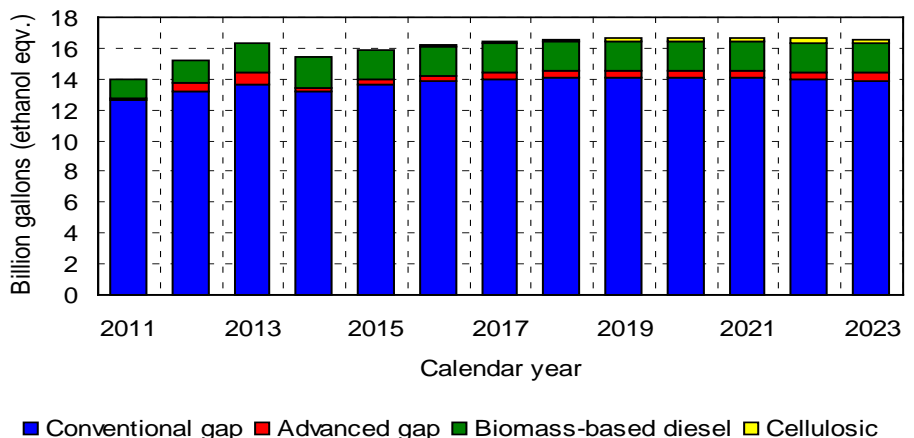
- Sugarcane ethanol imports from Brazil continue to decline in 2014 before leveling out.
- Lower RFS requirements for advanced biofuel could imply reduced ethanol imports.
- However, low-carbon fuel requirements in California provide some incentive for continued ethanol imports.
- Exports surge in 2014 before leveling off as low conventional ethanol prices keep U.S. competitive globally.

U.S. remains net exporter of ethanol



RFS requirements based on EPA proposed method

- RFS requirements remain relatively flat under EPA's proposed method, which this outlook assumes going forward.
- Sugarcane ethanol imports and domestic conventional ethanol eligible for the RFS are lower under the proposed rule than in EISA.
- Lower RFS requirements are easier to meet, so RIN prices fall in 2014 and remain flat to declining going forward.



## Ethanol supply and use

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Petroleum fuel prices</b>											
	(Dollars per barrel)										
Petroleum, W. Texas interm.	97.97	97.86	94.64	94.89	97.31	100.28	102.82	105.56	108.33	110.28	112.27
Petroleum, refiners' acquis.	102.07	97.96	93.61	93.73	96.27	98.82	100.82	103.04	105.37	107.20	109.09
	(Dollars per gallon)										
Unl. gasoline, FOB Omaha	2.90	2.81	2.73	2.70	2.75	2.83	2.91	2.99	3.05	3.10	3.15
Unleaded gasoline, retail	3.53	3.42	3.34	3.32	3.36	3.45	3.53	3.61	3.67	3.72	3.77
	(Million gallons)										
<b>Motor gasoline use*</b>	134,507	133,571	132,867	132,364	132,104	131,576	131,220	130,449	129,438	128,343	127,219
<b>Ethanol supply and use</b>											
Production	13,286	14,379	14,297	14,556	14,760	14,928	15,104	15,120	14,976	14,944	14,911
From corn	13,147	14,061	13,947	14,170	14,333	14,472	14,627	14,618	14,444	14,389	14,333
Other conventional	139	311	327	342	352	358	361	366	373	374	373
Cellulosic	0	7	23	44	75	98	115	136	158	181	205
Imports	306	157	185	197	191	187	175	172	178	172	177
Domestic disappearance	12,976	13,541	13,643	13,925	14,129	14,307	14,470	14,507	14,445	14,402	14,353
Exports	622	993	839	825	819	804	803	780	706	711	733
Ending stocks	848	849	849	851	855	859	863	868	871	873	875
	(Dollars per gallon)										
<b>Ethanol prices</b>	2.47	1.77	1.79	1.77	1.78	1.79	1.79	1.80	1.83	1.81	1.79
Conventional rack, Omaha	2.47	1.77	1.79	1.77	1.78	1.79	1.79	1.80	1.83	1.81	1.79
AMS spot plant price, Iowa	2.34	1.67	1.69	1.68	1.68	1.69	1.69	1.71	1.74	1.71	1.70
Other advanced rack	2.58	1.77	1.80	1.78	1.79	1.80	1.79	1.81	1.84	1.81	1.79
Effective retail	2.55	2.08	2.09	2.07	2.08	2.10	2.14	2.19	2.26	2.27	2.29
Ethanol/gasoline retail	72%	61%	63%	62%	62%	61%	60%	61%	62%	61%	61%
<b>RIN values</b>											
Conventional ethanol	0.54	0.29	0.31	0.32	0.32	0.31	0.27	0.23	0.20	0.15	0.11
Advanced ethanol	0.66	0.29	0.31	0.33	0.33	0.32	0.28	0.23	0.20	0.16	0.12

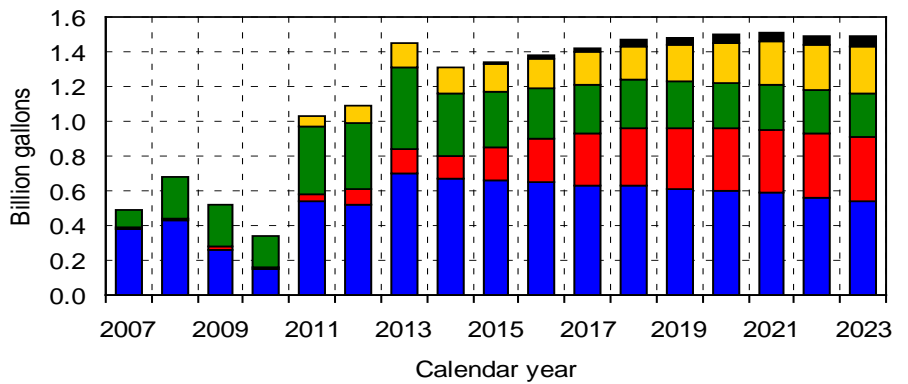
\* Includes fuel ethanol

## Biofuel policies

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Applicable percent standard</b>											
Overall	9.75%	9.20%	9.47%	9.64%	9.75%	9.83%	9.89%	9.91%	9.92%	9.92%	9.91%
Advanced biofuels	1.62%	1.33%	1.37%	1.42%	1.44%	1.48%	1.51%	1.53%	1.57%	1.60%	1.62%
Cellulosic biofuel	0.00%	0.01%	0.02%	0.05%	0.07%	0.09%	0.11%	0.13%	0.14%	0.16%	0.18%
Biomass-based diesel	1.13%	1.16%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.14%	1.15%
	(Million gallons)										
<b>Required volume</b>	16,361	15,412	15,893	16,201	16,417	16,557	16,663	16,688	16,672	16,635	16,584
Overall	16,361	15,412	15,893	16,201	16,417	16,557	16,663	16,688	16,672	16,635	16,584
Advanced biofuels	2,719	2,228	2,302	2,378	2,430	2,489	2,538	2,583	2,633	2,675	2,712
Cellulosic biofuel	1	12	39	72	114	148	177	205	232	259	287
Biomass-based diesel	1,265	1,296	1,281	1,280	1,280	1,279	1,278	1,278	1,278	1,278	1,277
Gaps: Conventional	13,643	13,184	13,591	13,824	13,986	14,068	14,125	14,105	14,038	13,960	13,872
Advanced	820	273	343	385	397	423	444	462	485	500	509

# Biomass-based diesel and biofuel plant returns

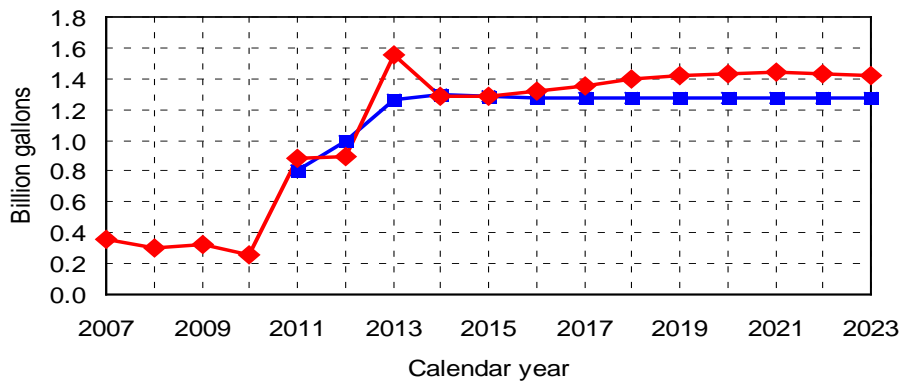
Biomass-based diesel production recovers slowly



■ Soy oil ■ Corn oil ■ Other fats/oils ■ Renewable diesel ■ Cellulosic diesel

- The outlook assumes the RFS requirements for biomass-based diesel remain at 1.28 billion gallons going forward.
- Biodiesel production falls in 2014 without the blenders tax credit in place.
- Biomass-based diesel production from corn oil continues to increase as more dry mill ethanol plants extract corn oil.
- Cellulosic diesel production levels increase slightly over time but remain relatively small.

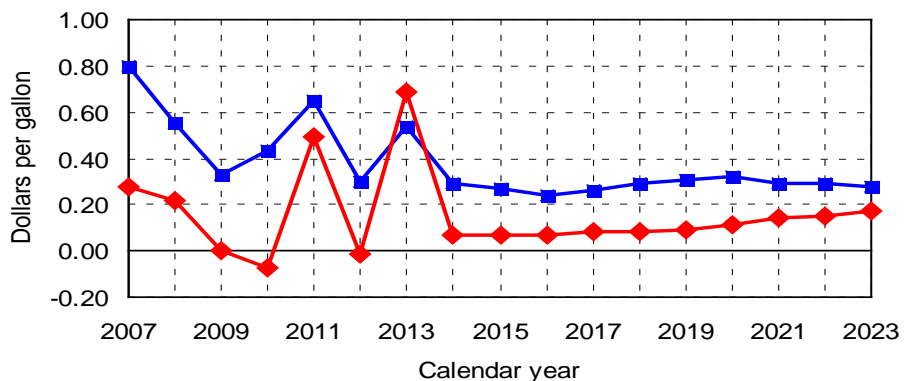
Biomass-based diesel use exceeds RFS mandate



■ RFS requirement ◆ Domestic use

- Domestic biomass-based diesel use falls from the level achieved in 2013, but remains at or just above the RFS requirement going forward.
- The stochastic simulations include many outcomes in which extra biomass-based diesel is used to help meet the advanced or overall mandates.
- In 2013, the U.S. was a strong net importer of biomass-based diesel, but is projected to be a moderate net exporter going forward.

Biofuel net returns show modest growth beyond 2014



■ Dry mill ethanol ◆ Soy oil biodiesel

- Dry mill ethanol net returns over operating costs decline in 2014 and then remain relatively stable.
- Biomass-based diesel net returns fall sharply in 2014 without the blenders tax credit in place.
- Biomass-based diesel net returns remain relatively low given excess capacity in the industry.

## Biomass-based diesel sector

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Biomass-based diesel supply</b>											
	(Million gallons)										
Production	1,451	1,311	1,340	1,382	1,423	1,467	1,482	1,497	1,506	1,495	1,488
From soybean oil	701	666	658	649	634	627	607	597	587	562	541
From corn oil	138	138	195	247	295	332	350	359	365	369	373
From other fats and oils	473	356	319	298	284	276	270	265	261	253	246
From cellulosic diesel	0	3	10	19	26	33	41	46	49	52	55
Renewable diesel	139	147	157	170	184	199	215	230	244	259	273
<b>Biomass-based diesel use</b>											
Domestic disappearance	1,552	1,286	1,286	1,320	1,358	1,401	1,417	1,431	1,440	1,430	1,424
Net exports	-106	24	53	62	65	65	65	66	66	65	64
Ending stocks	92	93	93	94	94	95	95	95	95	95	95
<b>Fuel prices and tax credit</b>											
	(Dollars per gallon)										
Biodiesel, rack	4.63	3.40	3.26	3.22	3.24	3.26	3.29	3.30	3.31	3.32	3.33
#2 Diesel, refiner sales	3.03	2.85	2.76	2.72	2.76	2.84	2.92	2.99	3.05	3.10	3.15
#2 Diesel, retail	3.92	3.69	3.61	3.58	3.62	3.70	3.79	3.86	3.92	3.97	4.02
Biodiesel tax credit	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>RIN values</b>											
Per RIN gallon	0.69	0.29	0.33	0.35	0.35	0.32	0.28	0.24	0.21	0.17	0.12
Per physical gallon	1.04	0.44	0.50	0.52	0.52	0.48	0.43	0.36	0.31	0.25	0.19

## Biofuel plant returns

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Biodiesel costs and returns</b>											
	(Dollars per gallon)										
Biodiesel value	4.63	3.40	3.26	3.22	3.24	3.26	3.29	3.30	3.31	3.32	3.33
Glycerin value	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Soyoil cost	-3.46	-2.85	-2.70	-2.66	-2.66	-2.68	-2.69	-2.67	-2.66	-2.65	-2.63
Other operating costs	-0.56	-0.57	-0.57	-0.58	-0.58	-0.59	-0.59	-0.60	-0.60	-0.61	-0.61
Net operating return	0.69	0.07	0.07	0.07	0.08	0.08	0.09	0.11	0.14	0.15	0.17
<b>Corn milling for ethanol</b>											
	(Million bushels)										
Corn wet milled for ethanol	545	530	492	465	469	471	475	475	469	454	441
Corn dry milled for ethanol	4,246	4,586	4,572	4,671	4,718	4,757	4,800	4,788	4,722	4,708	4,692
(Share de-oiling DDGS)	85%	90%	93%	95%	97%	98%	98%	98%	98%	98%	98%
<b>Dry mill ethanol costs, returns</b>											
	(Dollars per gallon)										
Ethanol value	2.47	1.77	1.79	1.77	1.78	1.79	1.79	1.80	1.83	1.81	1.79
Distillers grains value	0.71	0.52	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Corn oil value*	0.12	0.10	0.09	0.09	0.09	0.09	0.10	0.09	0.07	0.07	0.07
Corn cost	-2.25	-1.60	-1.53	-1.51	-1.50	-1.50	-1.49	-1.47	-1.45	-1.44	-1.42
Fuel and electricity cost	-0.18	-0.18	-0.21	-0.23	-0.22	-0.21	-0.20	-0.22	-0.26	-0.25	-0.25
Other operating costs	-0.34	-0.34	-0.34	-0.34	-0.35	-0.35	-0.35	-0.36	-0.36	-0.36	-0.37
Net operating return	0.54	0.29	0.27	0.24	0.26	0.29	0.31	0.32	0.29	0.29	0.28

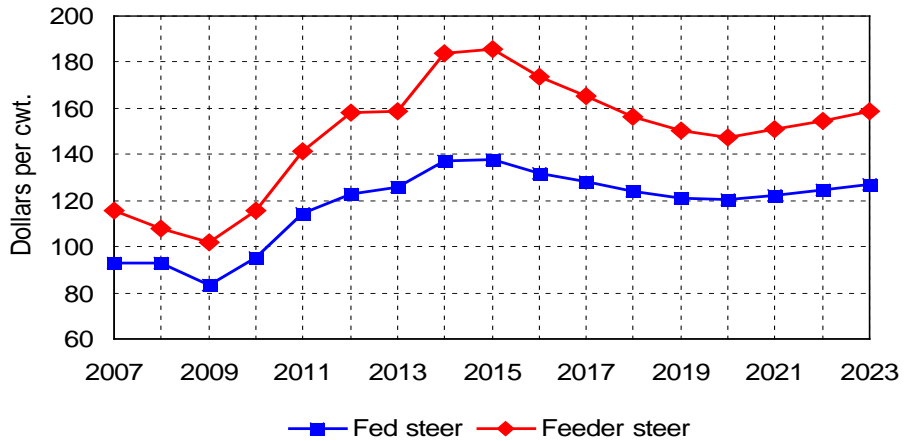
\* Weighted by share of dry mills de-oiling DDGs



# Cattle and hogs

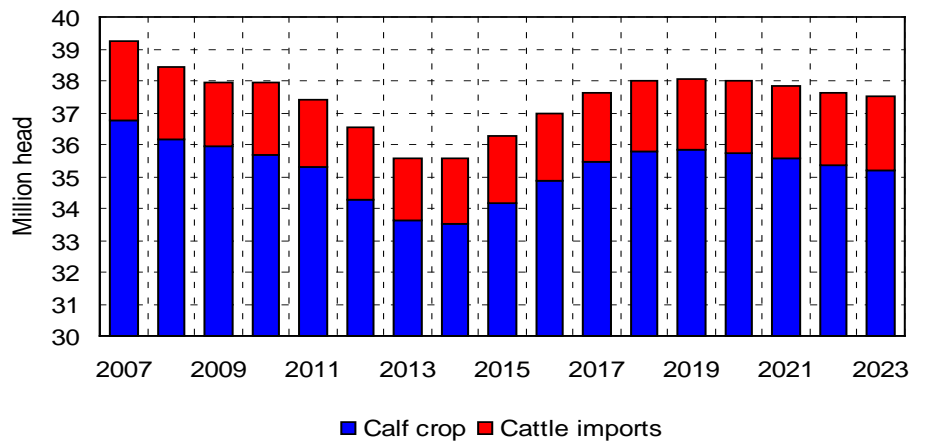
## Record high cattle prices to continue

- After reaching record annual highs in 2013, fed and feeder steer prices are expected to sharply increase again in 2014.
- The record feeder steer prices will combine with a decrease in cow-calf production costs to yield average net returns of well over \$200 per cow in both 2014 and 2015.
- Feedlots margins should increase in 2014, as higher fed steer prices and cheaper corn offset more expensive feeder cattle.



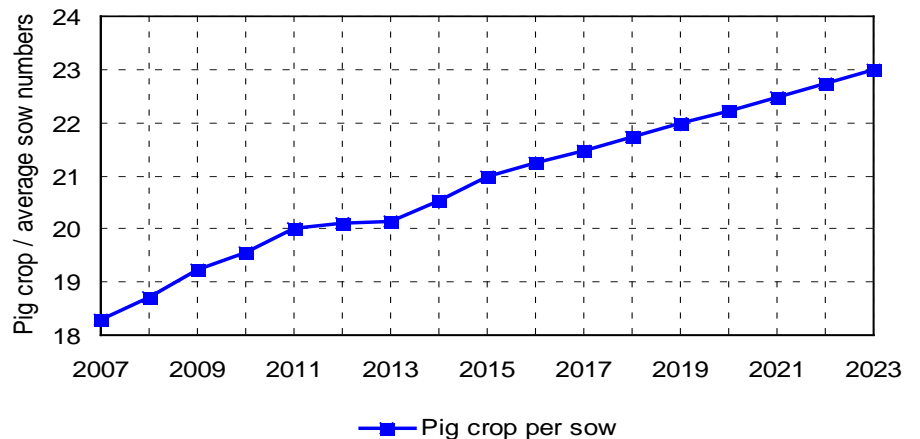
## It will take time to rebuild the cattle herd

- Beef cow inventories declined during 2013 for the seventh consecutive year.
- This will result in a 2014 calf crop that is more than 10 percent below the average of the early 2000s.
- Cattle imports were also at their lowest level in 8 years in 2013 as the combined herds of Canada and Mexico contract.



## PED virus effects on the pork supply are unknown

- Strong expected profitability in the pork sector will lead to an increase in the U.S. sow herd.
- Productivity growth in the hog sector has driven most of the pork production increase in recent years, though the PED virus has caused great uncertainty.
- If the disease is not effectively controlled soon, productivity and therefore pork production estimates for 2014 will need to be revised downward.



## Cattle and hogs

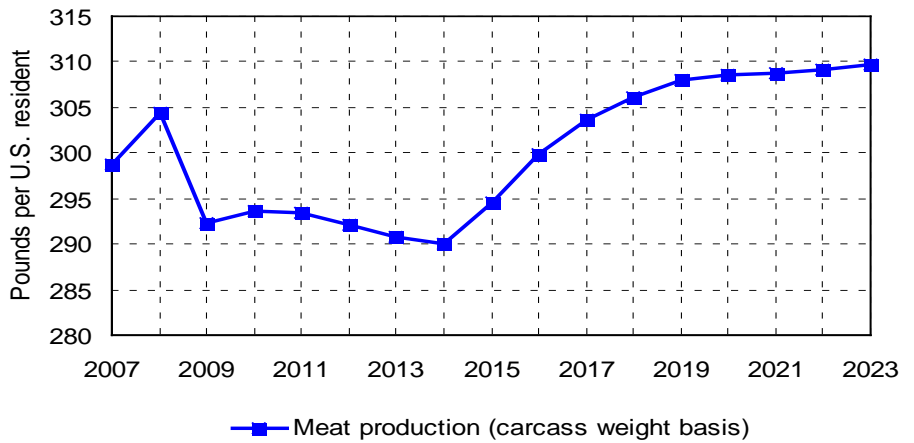
Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>CATTLE</b>											
	(Million head)										
Beef cows (Jan. 1)	29.3	28.9	29.4	30.0	30.6	30.9	30.9	30.8	30.5	30.3	30.1
Dairy cows (Jan. 1)	9.2	9.2	9.3	9.4	9.5	9.6	9.6	9.6	9.6	9.6	9.7
Cattle and calves (Jan. 1)	89.3	87.7	87.9	89.0	89.9	90.8	91.3	91.1	90.5	89.8	89.2
Cattle on feed (Jan. 1)	13.4	12.5	13.0	13.4	13.5	13.7	13.9	13.9	13.9	13.9	13.8
Calf crop	33.6	33.5	34.2	34.9	35.5	35.8	35.8	35.7	35.6	35.4	35.2
Cattle slaughter	33.3	31.5	31.4	32.1	32.7	33.5	34.2	34.5	34.4	34.2	34.0
Cattle imports	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3
Cattle exports	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Prices</b>											
Total all grades,	(Dollars per hundredweight)										
5-Area direct steers	125.89	137.20	137.74	131.94	128.01	124.09	121.08	120.22	122.29	124.44	126.73
600 - 650 #, Oklahoma City											
Feeder steers	158.80	184.07	185.82	173.66	165.11	156.33	150.09	147.64	150.96	154.73	158.70
Utility cows, Sioux Falls	76.38	85.66	86.60	78.89	72.71	68.88	64.54	61.94	62.95	64.49	66.00
<b>Cow-calf returns</b>											
	(Dollars per cow)										
Receipts	837.50	938.98	942.78	875.11	827.03	784.03	751.36	737.37	753.07	771.39	790.57
Feed expenses	259.75	227.22	205.51	202.86	202.67	205.13	207.24	208.07	207.23	206.21	204.87
Non-feed expenses	469.91	479.49	486.12	491.77	500.02	503.59	506.80	512.78	521.98	529.31	537.02
Net returns	107.84	232.28	251.16	180.48	124.34	75.30	37.32	16.52	23.86	35.86	48.69
<b>HOGS</b>											
	(Million head)										
Hogs for breeding (Dec. 1*)	5.82	5.76	5.82	5.92	5.93	5.86	5.78	5.70	5.63	5.63	5.64
Market hogs (Dec. 1*)	60.6	60.2	60.0	62.4	64.1	64.5	64.4	64.1	64.0	64.2	64.9
Sows farrowed	11.41	11.54	11.79	11.93	11.89	11.75	11.61	11.48	11.44	11.47	11.52
Pig crop	116.6	118.8	123.2	125.8	126.6	126.4	126.1	125.9	126.6	128.2	129.9
Barrow and gilt slaughter	108.6	109.6	111.9	115.4	117.5	117.9	117.9	117.7	118.0	119.1	120.6
Hog imports	4.9	5.0	5.0	5.1	5.1	5.1	5.2	5.2	5.3	5.3	5.3
Hog exports	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Prices</b>											
Natl. base 51-52% lean equiv.	(Dollars per hundredweight)										
Barrows & gilts	64.05	64.25	61.10	56.62	54.65	54.99	56.01	57.72	58.81	58.06	56.81
IA-S. Minn. #1-2, 300-400 #											
Sows	59.99	58.17	51.50	47.97	46.45	46.77	47.59	49.06	49.81	49.08	47.99
<b>Farrow-finish returns</b>											
	(Dollars per hundredweight)										
Receipts	66.82	66.50	63.02	58.23	56.23	56.57	57.61	59.35	60.45	59.69	58.42
Feed expenses	47.81	37.93	34.79	34.46	34.28	34.33	34.28	34.29	34.17	34.08	33.98
Non-feed expenses	21.97	21.92	21.95	22.14	22.37	22.57	22.74	22.97	23.24	23.43	23.63
Net returns	-2.96	6.65	6.29	1.63	-0.41	-0.32	0.59	2.09	3.04	2.18	0.82

\* Preceding year

# Meat

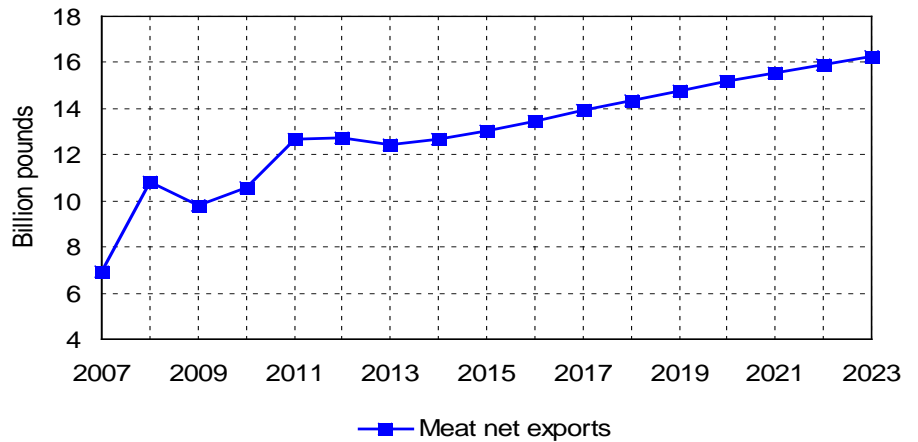
## Meat production has lagged U.S. population growth

- The total of U.S. beef, pork, chicken and turkey production will increase at a rate slower than U.S. population growth for the fourth time in a row in 2014.
- As all livestock sectors adjust to the reduced input costs that have now been in effect for a few months, production growth will resume in 2015.
- It will still take several years to return to the 2008 level of meat production per person.



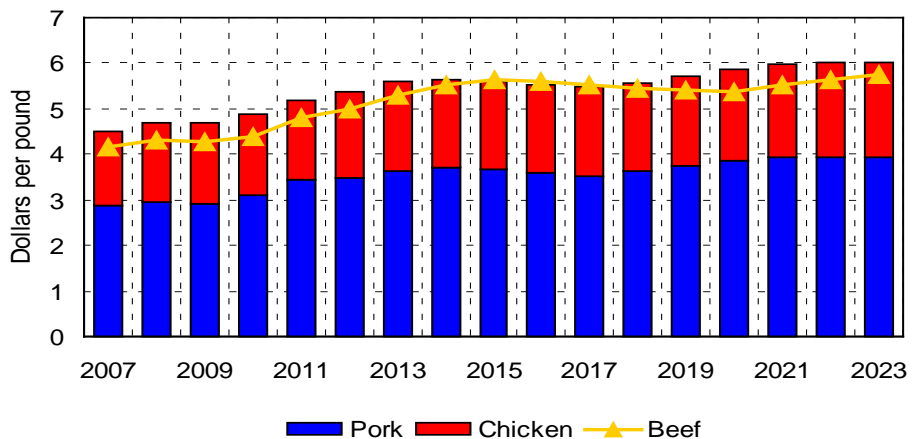
## Meat trade remains firm even as prices increase

- Reduced meat supplies have not yet negatively affected trade volumes.
- With international demand for U.S. meat products remaining strong, the amount of meat available for the domestic market will decline in 2014 for the seventh time in eight years.
- The U.S. exported 17 percent of total meat production in 2013, and this share will show modest growth during the projection period.



## Retail beef prices climb in 2014

- Retail prices for most meat products will continue to climb in 2014, though at a slower rate than in recent years.
- Beef prices remain firm relative to other products. One pound of beef at the retail level will cost about the same as one pound of pork plus one pound of chicken in 2014.
- A slowly strengthening economy should allow meat demand strength to remain at or above current levels in the absence of a food safety scare.

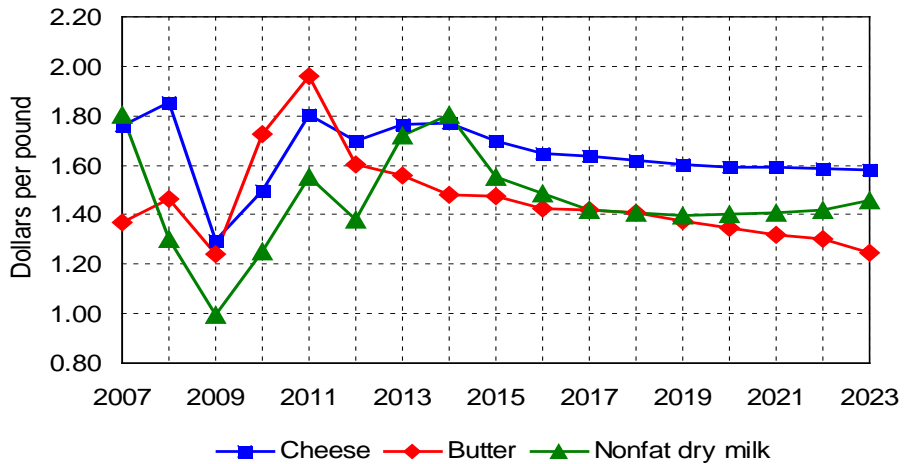


## Meat sector

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Beef</b>	(Million pounds)										
Production	25,800	24,451	24,473	25,143	25,731	26,426	27,025	27,377	27,408	27,360	27,266
Imports	2,254	2,357	2,458	2,539	2,578	2,612	2,650	2,685	2,727	2,730	2,730
Domestic use	25,533	24,399	24,475	25,079	25,563	26,154	26,649	26,948	26,981	26,920	26,812
Exports	2,534	2,479	2,453	2,576	2,726	2,860	3,006	3,102	3,152	3,174	3,189
Ending stocks	595	525	529	556	576	600	619	631	633	630	625
<b>Pork</b>											
Production	23,212	23,674	24,341	25,202	25,760	25,938	26,025	26,081	26,245	26,576	27,013
Imports	876	880	885	901	902	908	916	926	935	944	951
Domestic use	19,139	19,372	19,734	20,361	20,741	20,771	20,702	20,584	20,561	20,720	20,984
Exports	4,974	5,194	5,493	5,707	5,901	6,074	6,243	6,429	6,620	6,791	6,966
Ending stocks	600	589	588	623	643	644	640	633	632	640	654
<b>Broiler</b>											
Production	37,347	38,626	39,905	40,674	41,396	42,046	42,650	43,200	43,759	44,317	44,904
Domestic use	30,001	31,150	32,235	32,875	33,434	33,923	34,366	34,754	35,151	35,555	35,976
Exports	7,416	7,583	7,752	7,905	8,073	8,240	8,405	8,570	8,733	8,891	9,056
Ending stocks	700	705	737	748	755	758	760	760	761	761	762
<b>Turkey</b>											
Production	5,734	5,794	6,040	6,184	6,287	6,368	6,437	6,488	6,533	6,580	6,625
Domestic use	5,030	5,004	5,237	5,377	5,470	5,542	5,603	5,645	5,680	5,719	5,755
Exports	767	780	800	815	830	842	852	862	872	882	892
Ending stocks	255	285	309	323	331	337	341	346	350	353	356
<b>Wholesale prices</b>	(Dollars per hundredweight)										
Boxed beef cutout	195.66	212.19	213.09	206.17	202.05	197.92	194.65	194.18	197.60	201.10	204.76
Pork cutout	91.73	93.61	90.07	84.18	82.22	83.53	85.83	88.96	90.78	90.71	89.85
National wholesale broiler	99.70	93.56	89.58	89.22	89.64	90.47	91.15	92.15	93.07	94.00	94.72
Natl. wholesale turkey hens	99.80	102.05	95.53	93.55	93.47	94.12	94.79	95.50	96.41	97.19	98.01
<b>Retail prices</b>	(Dollars per pound)										
Beef	5.29	5.51	5.64	5.59	5.52	5.46	5.41	5.39	5.53	5.65	5.77
Pork	3.64	3.70	3.67	3.58	3.53	3.61	3.73	3.85	3.95	3.94	3.92
Broiler	1.96	1.95	1.93	1.93	1.94	1.96	1.99	2.01	2.04	2.06	2.09
Turkey	1.66	1.67	1.65	1.62	1.63	1.65	1.67	1.69	1.72	1.74	1.76
<b>Per capita consumption</b>	(Pounds, retail)										
Beef	56.4	53.5	53.3	54.2	54.8	55.6	56.2	56.4	56.1	55.6	54.9
Pork	46.9	47.1	47.6	48.7	49.3	49.0	48.4	47.8	47.4	47.4	47.7
Broiler	81.4	83.8	86.1	87.1	87.9	88.5	89.0	89.3	89.7	90.0	90.4
Turkey	15.9	15.7	16.3	16.6	16.7	16.8	16.9	16.9	16.9	16.9	16.8
Total	200.6	200.1	203.2	206.6	208.7	210.0	210.6	210.5	210.0	209.9	209.9

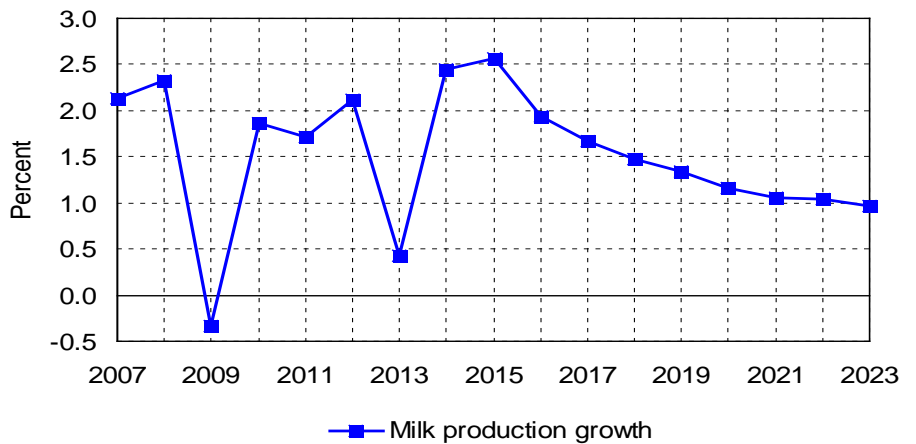
# Dairy

## Cheese and NFD prices to remain strong



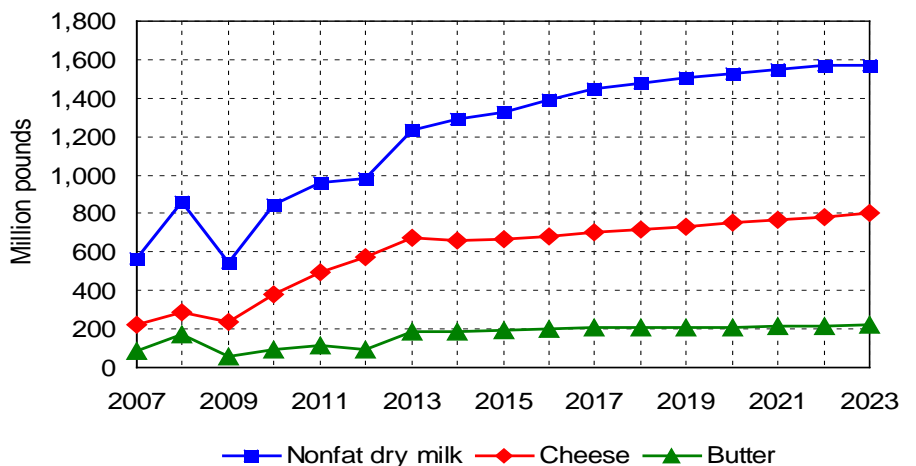
- Cheese and nonfat dry milk prices are expected to average near \$1.80 per pound in 2014.
- These projected product prices translate to an all milk price expected to exceed \$20 per cwt. this year, before declining to the \$17-18 range later in the projection period.
- Milk prices at that level, when combined with declining feed costs, should lead to strongly positive profit margins for most dairy producers in 2014.

## Better margins will lead to higher milk output



- Milk production is projected to increase at its highest rate since 2006 in 2014.
- Even with a strong rate of production growth in 2014, demand should be strong enough to prevent a decline in milk prices, setting the stage for another year of strong growth in 2015.
- The dairy margin program contained in the 2014 farm bill would provide more support to producers in the event of poor margin years such as 2012 and 2009.

## High international prices fuel dairy product exports



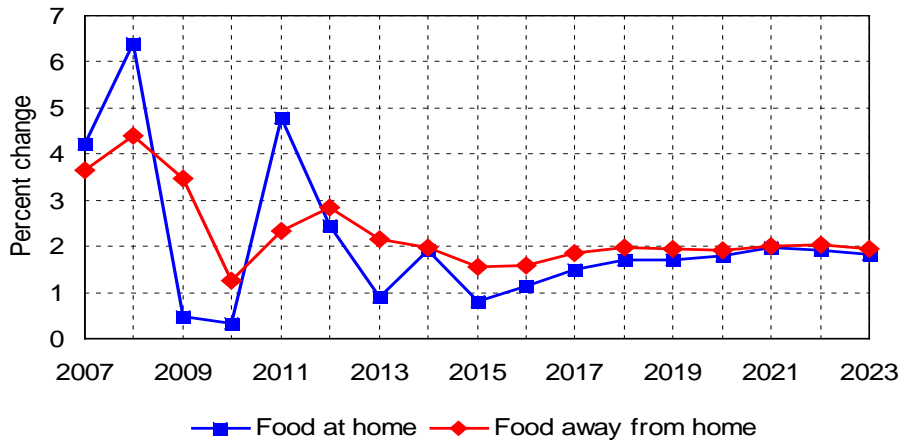
- International dairy product prices are near record highs at the beginning of 2014.
- The U.S. is able to export large quantities of milk powders into world markets at these price levels. Cheese and butter exports benefit to a lesser extent.
- The strong international market prices are due in part to supply factors in major exporting nations, which are likely temporary. However, strong demand, particularly for milk powder in China, may be a longer lasting market phenomenon.

## Dairy sector

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Milk supply</b>											
Dairy cows (thou. head)	9,219	9,274	9,401	9,486	9,545	9,589	9,622	9,642	9,652	9,661	9,670
California	1,781	1,782	1,793	1,797	1,796	1,792	1,789	1,786	1,783	1,780	1,780
Wisconsin	1,271	1,280	1,297	1,310	1,320	1,328	1,334	1,339	1,341	1,343	1,343
New York	611	616	625	630	632	633	632	631	629	626	624
Idaho	574	574	581	586	591	596	600	605	609	613	618
Pennsylvania	532	536	543	546	548	549	550	550	549	549	548
Minnesota	465	467	473	478	482	487	491	494	497	499	501
Texas	439	444	453	460	465	469	473	475	476	477	478
Michigan	380	387	397	405	413	420	426	432	438	444	450
New Mexico	322	322	325	326	326	327	328	327	327	326	326
Ohio	270	272	276	278	279	279	279	278	277	277	276
Rest of U.S.	2,573	2,596	2,639	2,670	2,692	2,708	2,719	2,725	2,726	2,727	2,726
Milk yield (lbs. per cow)	21,822	22,225	22,490	22,721	22,956	23,189	23,418	23,640	23,863	24,091	24,301
Milk production (bil. lbs.)	201.2	206.1	211.4	215.5	219.1	222.4	225.3	227.9	230.3	232.7	235.0
<b>Min. FMMO class prices</b>											
	(Dollars per hundredweight)										
Class I mover	18.84	20.02	18.21	17.50	17.12	16.96	16.85	16.79	16.61	16.78	16.77
Class II	19.42	20.19	17.98	17.18	16.63	16.44	16.22	16.16	16.09	16.10	16.22
Class III	17.99	17.87	16.78	16.17	15.98	15.80	15.60	15.45	15.38	15.36	15.24
Class IV	19.05	19.49	17.28	16.48	15.93	15.74	15.52	15.46	15.39	15.40	15.52
All milk price	19.99	20.59	19.01	18.33	18.00	17.82	17.64	17.54	17.45	17.48	17.47
<b>Actual dairy prod. margin</b>	n.a.	9.82	9.72	9.40	9.14	8.95	8.74	8.60	8.53	8.59	8.61
<b>Wholesale prices</b>											
	(Dollars per pound)										
Butter, CME	1.56	1.48	1.48	1.42	1.42	1.41	1.38	1.34	1.32	1.30	1.25
Cheese, Amer., 40#, CME	1.76	1.77	1.70	1.65	1.64	1.62	1.60	1.59	1.59	1.59	1.58
Nonfat dry milk, AA	1.72	1.81	1.55	1.48	1.42	1.41	1.40	1.40	1.41	1.42	1.46
Evaporated milk	2.12	2.02	1.93	1.91	1.90	1.90	1.91	1.92	1.93	1.94	1.95
<b>Dairy product production</b>											
	(Million pounds)										
American cheese	4,437	4,523	4,646	4,727	4,781	4,836	4,890	4,931	4,964	5,000	5,046
Other cheese	6,723	6,912	7,132	7,317	7,482	7,649	7,800	7,939	8,071	8,206	8,355
Butter	1,881	1,982	2,037	2,090	2,132	2,166	2,197	2,225	2,250	2,275	2,312
Nonfat dry milk	2,013	2,214	2,315	2,406	2,493	2,578	2,660	2,737	2,810	2,885	2,938
<b>Dairy product exports</b>											
American cheese	179	184	191	200	209	218	226	235	243	252	260
Other cheese	492	475	475	484	491	499	508	516	524	532	541
Butter	185	188	193	199	206	205	208	211	215	217	224
Nonfat dry milk	1,235	1,291	1,325	1,389	1,446	1,477	1,505	1,529	1,547	1,569	1,573
<b>Per-capita consumption</b>											
	(Pounds)										
Butter	5.4	5.7	5.8	5.9	6.0	6.0	6.1	6.1	6.1	6.2	6.2
Nonfat dry milk	2.4	2.8	3.0	3.1	3.1	3.3	3.4	3.6	3.7	3.8	4.0
Total cheese	33.6	34.4	35.1	35.6	36.0	36.3	36.6	36.9	37.0	37.2	37.5
American	13.2	13.5	13.7	13.8	13.9	13.9	14.0	14.0	13.9	13.9	13.9
Other	20.3	20.8	21.4	21.8	22.1	22.4	22.7	22.9	23.1	23.3	23.6
Total fluid milk	193.5	191.7	191.9	191.6	191.3	190.6	189.7	188.7	187.7	186.5	185.4
Ice cream	22.7	22.5	22.8	22.9	22.9	22.9	22.9	22.8	22.7	22.7	22.6

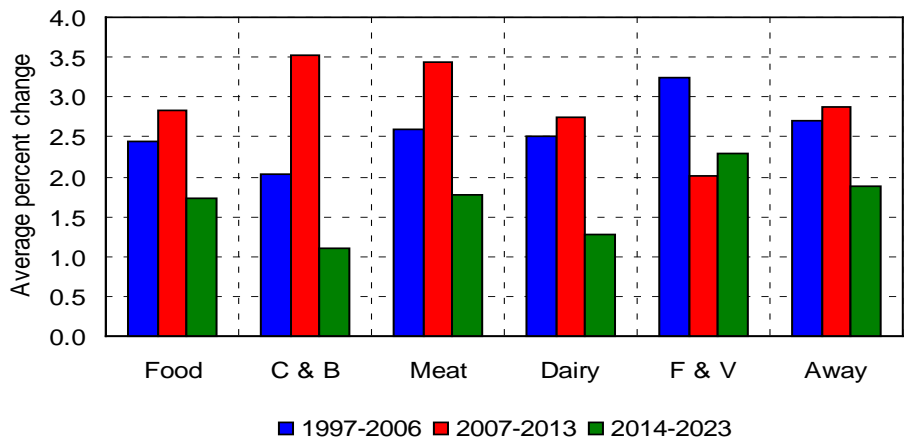
# Food prices and expenditures

Food inflation expected near 2 percent in 2014



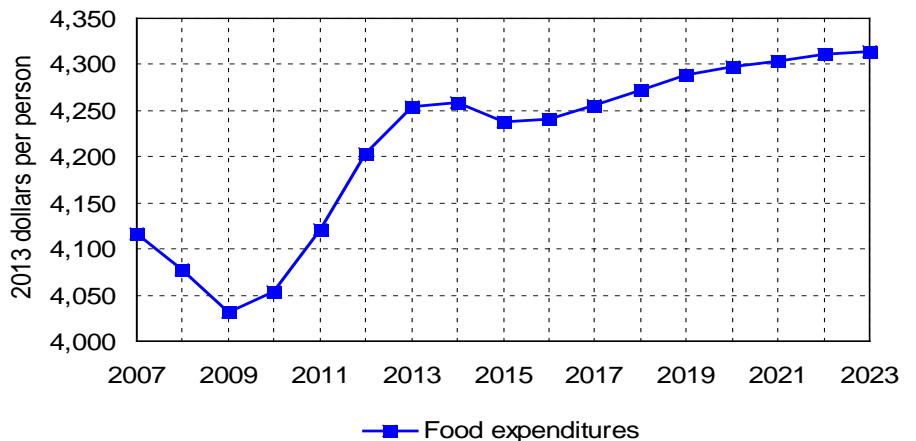
- The CPI for food at home is projected to increase by 2.0 percent in 2014, very near the average of the previous five years.
- Food away from home price inflation, which is typically less volatile than food at home inflation, will also be near two percent.
- Spending on food away from home accounts for nearly one half of all U.S. food consumer expenditures.

Lower inflation expected for most food categories



- After generally larger increases from 2007-2013 vs. the previous decade, most components of food inflation are expected to grow more slowly in the next decade.
- Fruit and vegetable prices have not followed the general trend, and they could be higher than projected if the drought in California persists.
- Macroeconomic projections are a key factor in future food price inflation, as raw commodity values only account for 15-20 percent of U.S. consumer food spending.

Real per capita food expenditures to decline in 2015



- Food accounted for less than 7 percent of U.S. consumer expenditures in 2012, lower than all of the other 80 countries that USDA tracks.
- However, the increase in per capita real food expenditures from 2010-2013 does pose a challenge for many families, particularly when combined with a slowly recovering economy.
- Food costs should moderate for the next couple of years, assuming that average weather allows for projected crop yields.

## Consumer price indices for food

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
					(1982-84=100)						
<b>Total food</b>	237.0	241.7	244.4	247.6	251.7	256.3	261.0	265.8	271.1	276.4	281.6
(Inflation rate)	1.4%	2.0%	1.1%	1.3%	1.7%	1.8%	1.8%	1.8%	2.0%	2.0%	1.9%
<b>Food at home</b>	233.9	238.4	240.3	243.0	246.7	250.9	255.2	259.7	264.9	270.0	274.9
Cereal and bakery	270.4	270.4	270.6	273.7	277.3	281.2	284.9	289.0	293.3	297.5	301.5
Meat	236.0	243.1	246.0	247.1	249.7	253.3	257.6	262.6	269.0	275.4	281.4
Dairy	217.6	221.0	220.2	221.8	224.5	227.8	231.2	234.8	238.8	242.9	246.7
Fruit and vegetables	290.0	298.7	303.2	309.6	317.3	325.2	332.8	340.4	348.3	356.2	363.9
Other food at home	204.8	207.6	209.1	211.4	214.2	217.3	220.4	223.5	226.9	230.3	233.5
Sugar and sweets	211.0	212.3	214.8	218.5	221.5	224.9	228.2	231.5	235.1	238.7	242.1
Fats and oils	229.3	232.1	232.4	235.3	239.3	243.4	247.6	252.0	256.6	261.1	265.4
Other prepared items	217.7	220.9	221.9	223.7	226.5	229.6	232.9	236.1	239.6	243.1	246.6
Non-alc. beverages	166.9	169.4	171.9	174.4	176.8	179.4	181.9	184.4	187.2	190.0	192.6
<b>Food away from home</b>	243.1	247.8	251.7	255.7	260.4	265.5	270.7	275.9	281.4	287.1	292.8

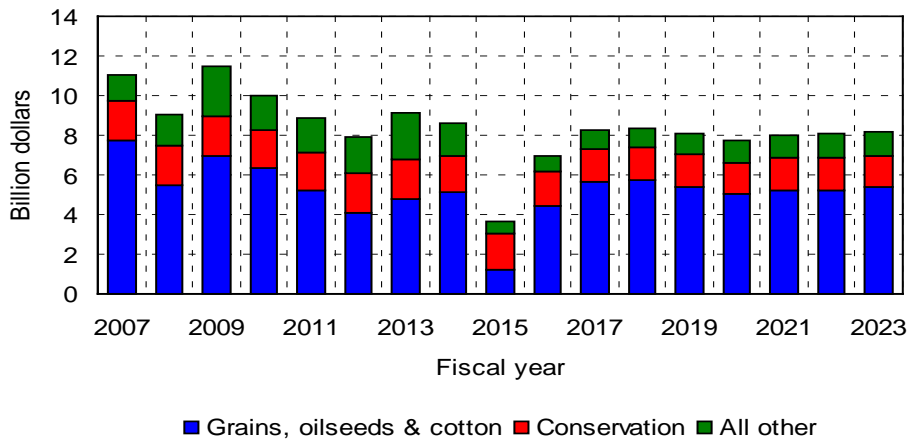
## Consumer expenditures for food

Calendar year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
					(Dollars per person)						
<b>Total food per capita</b>	4,255	4,320	4,374	4,457	4,559	4,669	4,774	4,878	4,986	5,091	5,192
Food at home	2,191	2,209	2,218	2,244	2,281	2,322	2,361	2,402	2,445	2,488	2,528
Food away from home	2,064	2,110	2,157	2,213	2,277	2,347	2,413	2,477	2,541	2,603	2,664
Multiply by population for:					(Billion dollars)						
<b>Total U.S. food expenditures</b>	1,337	1,371	1,402	1,442	1,489	1,540	1,590	1,640	1,692	1,744	1,795



# Government costs

CCC net outlays total \$76 billion over FY 2014-23



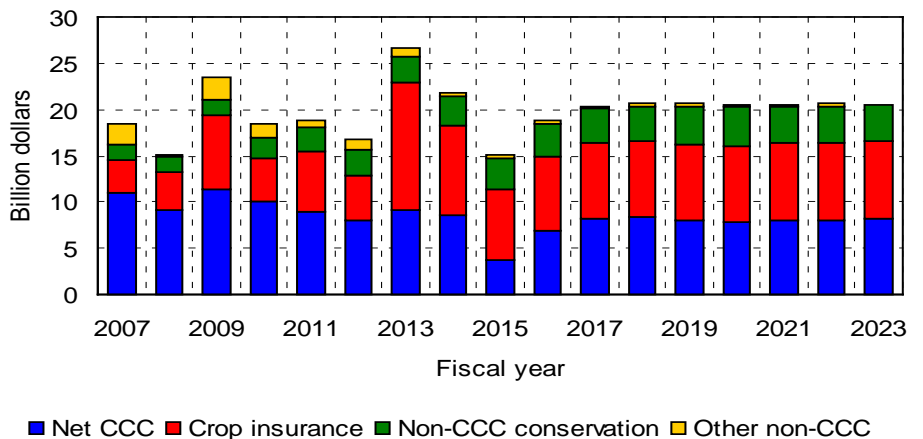
- Net CCC outlays were \$9 billion in FY 2013, with direct payments accounting for half the total.

- Under the new farm bill, net CCC outlays dip sharply in FY 2015. The first payments under the PLC and ARC programs will not be made until October 2015 (FY 2016).

- After FY 2015, net outlays average about \$8 billion per year.

- The last tobacco trust fund payments are made in FY 2014.

Crop insurance share of program spending increases

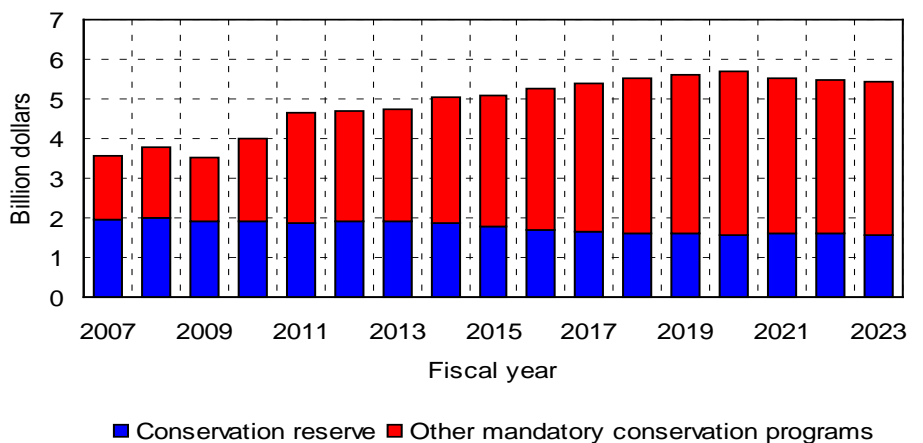


- Mandatory government outlays under the crop insurance program and certain conservation and disaster programs are not included in the CCC account.

- Crop insurance net outlays jumped in FY 2013 because of indemnities paid on losses associated with the 2012 drought.

- Crop insurance net outlays average about \$8 billion per year over the FY 2014-23 period.

CRP outlays fall, other conservation programs rise



- CRP spending reflects changes in CRP area under contract and rental rates when new contracts are signed.

- For other mandatory conservation programs, projected expenditures are based on preliminary CBO estimates.

- Provisions of the 2014 farm bill lead to increased spending on the Conservation Stewardship Program, the Environmental Quality Incentive Program and other conservation programs.

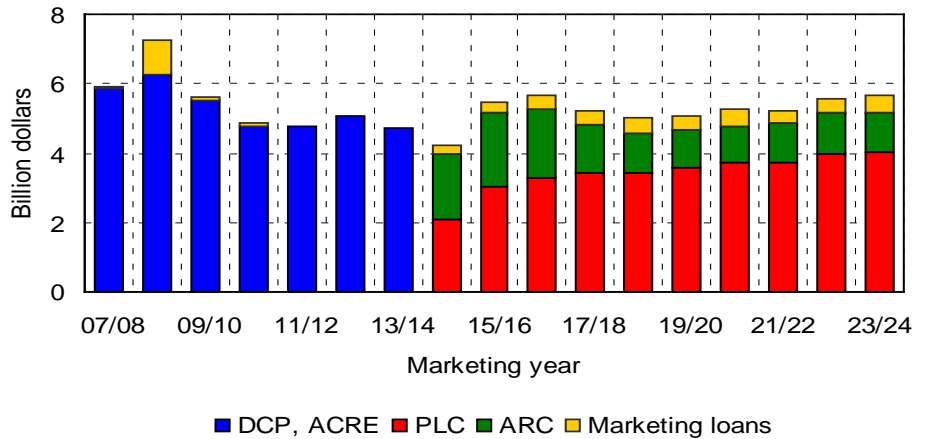
## Net government outlays

Fiscal year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Feed grains</b>	(Million dollars)										
Corn	1,916	1,984	247	1,689	2,160	2,182	1,875	1,732	1,861	1,944	2,031
Sorghum	188	174	5	156	219	223	222	211	233	241	246
Barley	77	75	3	479	510	525	530	527	537	546	556
Oats	3	3	1	1	4	5	6	5	5	6	6
<b>Food grains</b>											
Wheat	1,116	1,114	94	852	1,242	1,257	1,243	1,236	1,278	1,293	1,285
Rice	292	433	17	41	160	155	160	165	167	167	158
<b>Oilseeds</b>											
Soybeans	539	586	64	798	886	895	881	666	617	577	651
Peanuts	107	36	4	84	88	109	118	131	139	151	170
Other oilseeds	18	17	12	62	65	68	73	72	75	74	76
<b>Other commodities</b>											
Upland cotton	562	695	777	314	349	354	304	324	340	240	216
Sugar, feedstock flexibility	222	-1	21	36	32	45	49	57	58	69	80
Dairy	272	-10	-17	-6	86	133	185	246	311	340	312
<b>CCC conservation</b>											
Conservation reserve	1,928	1,852	1,780	1,701	1,644	1,620	1,595	1,549	1,594	1,598	1,559
Other CCC conservation	4	5	5	5	5	1	1	1	1	1	1
<b>Tobacco trust fund</b>	857	960	0	0	0	0	0	0	0	0	0
<b>Other CCC</b>											
Disaster payments, NAP	318	146	142	142	142	142	142	141	141	141	141
Other net costs	745	-9,679	-5,796	-9,128	-10,416	-10,597	-10,349	-10,107	-10,095	-10,053	-10,160
<b>Net CCC outlays</b>	9,165	8,576	3,682	6,953	8,260	8,391	8,059	7,743	8,038	8,069	8,169
<b>NRCS conservation</b>	2,811	3,205	3,308	3,540	3,745	3,880	4,017	4,165	3,928	3,891	3,886
<b>Supplem. revenue (SURE)</b>	1,095	0	0	0	0	0	0	0	0	0	0
<b>Other non-CCC disaster</b>	7	904	364	314	296	295	297	300	302	303	306
<b>Crop insurance</b>	13,807	9,715	7,751	8,003	8,082	8,131	8,238	8,311	8,321	8,366	8,463
<b>Total mandatory outlays</b>	26,885	22,400	15,104	18,811	20,383	20,697	20,611	20,519	20,590	20,629	20,824

Note: "NRCS Conservation" denotes mandatory spending on conservation programs authorized by the 2002, 2008 and 2014 farm bills that is not included in reported CCC outlays. Fiscal years begin on Oct.1 of the previous calendar year (FY 2014: Oct. 1, 2013-Sep. 30, 2014). All projections are averages across 500 outcomes.

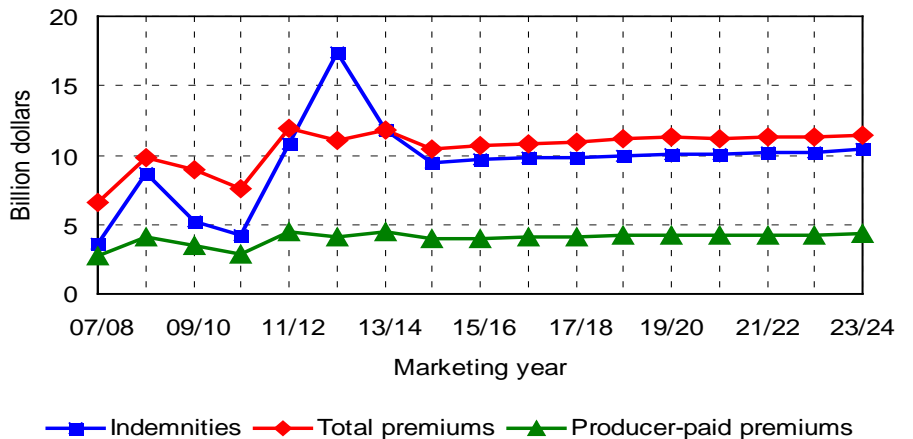
# Payments and crop insurance

PLC and ARC replace DCP and ACRE



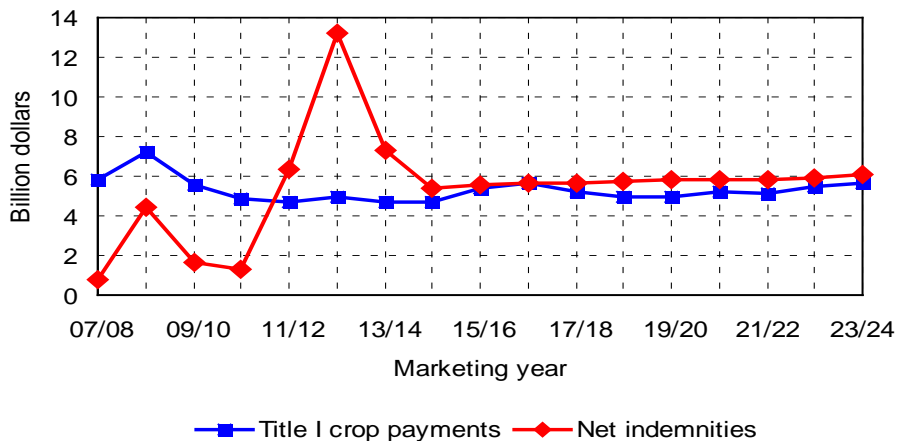
- With the new farm bill in place, no DCP or ACRE payments will be made after final ACRE and countercyclical payments are paid on the 2013/14 crop.
- Projected ARC and PLC payments under the new farm bill average about \$5 billion per year.
- Marketing loan benefits may occur when prices are especially low.
- Unlike past direct payments, future ARC and PLC payments may vary greatly from one year to the next.

Crop insurance indemnities set record in 2012/13



- Crop insurance indemnities spiked because of the 2012 drought.
- The projections include the new STAX policy for cotton and SCO for program crops.
- While these new programs increase crop insurance premiums and indemnities, lower projected average crop prices have the opposite effect.
- The average annual loss ratio (total indemnities divided by total premiums) over the next 10 years is 0.90.

Net indemnities exceed Title I payments



- The crop insurance program has grown in importance relative to other farm programs.
- Projected net indemnities (indemnities minus producer-paid premiums) exceed the projected value of crop payments under Title I (PLC, ARC and marketing loans) of the new farm bill.
- Projected net USDA expenditures on the crop insurance program total \$83 billion over the FY 2014-FY 2023 period.

## Selected direct government payments

Marketing year	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24
	(Million dollars)										
Direct payments	4,489	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Cotton transition payments	n.a.	470	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Marketing loans	0	247	334	412	398	474	392	482	337	404	478
Countercyclical payments	0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
ACRE payments	256	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
PLC payments	n.a.	2,081	3,048	3,303	3,410	3,437	3,600	3,704	3,749	3,998	4,019
ARC payments	n.a.	1,914	2,100	1,944	1,416	1,124	1,055	1,074	1,111	1,162	1,171
<b>Total</b>	<b>4,745</b>	<b>4,712</b>	<b>5,483</b>	<b>5,659</b>	<b>5,225</b>	<b>5,034</b>	<b>5,047</b>	<b>5,261</b>	<b>5,196</b>	<b>5,563</b>	<b>5,667</b>

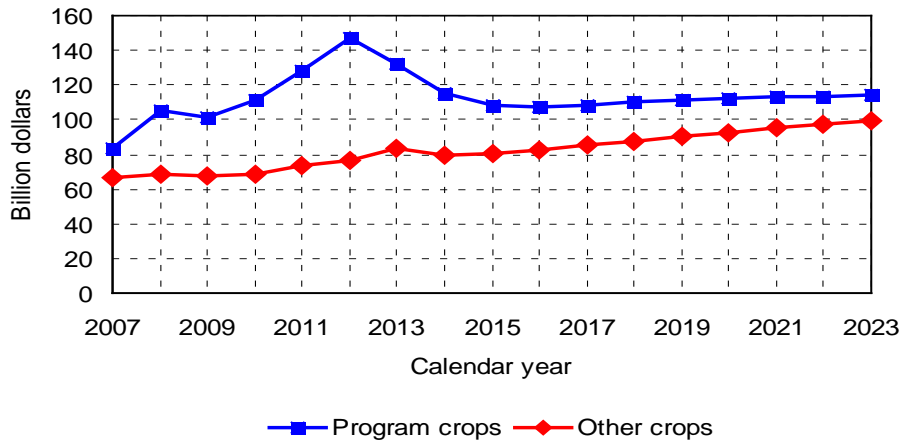
Note: Includes selected payments for feed grains, food grains, oilseeds, and upland cotton.  
All projections are averages across 500 outcomes.

## Crop insurance

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	(Million dollars, crop year)										
<b>Total premiums</b>	11,773	10,449	10,727	10,859	10,979	11,145	11,253	11,239	11,263	11,339	11,474
Producer-paid premiums	4,498	3,991	4,016	4,072	4,120	4,185	4,225	4,219	4,226	4,251	4,299
Premium subsidies	7,275	6,458	6,710	6,788	6,859	6,960	7,028	7,021	7,037	7,088	7,175
<b>Total indemnities</b>	11,850	9,430	9,669	9,780	9,848	9,988	10,084	10,089	10,132	10,235	10,398
<b>Loss ratio</b>	1.01	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.91
	(Million dollars, crop year)										
<b>Net indemnities</b>	7,352	5,439	5,652	5,708	5,728	5,803	5,859	5,870	5,906	5,984	6,099
Corn	4,024	2,047	2,107	2,128	2,131	2,184	2,176	2,163	2,161	2,166	2,203
Soybeans	416	1,238	1,116	1,160	1,176	1,187	1,233	1,256	1,280	1,316	1,342
Wheat	1,499	815	816	808	812	818	818	817	825	834	850
Upland cotton	629	347	566	554	542	539	547	548	547	560	566
All other	784	992	1,048	1,059	1,067	1,075	1,085	1,085	1,093	1,107	1,138
	(Million dollars, fiscal year)										
<b>Net outlays</b>	13,806	9,715	7,751	8,003	8,082	8,131	8,238	8,311	8,321	8,366	8,463

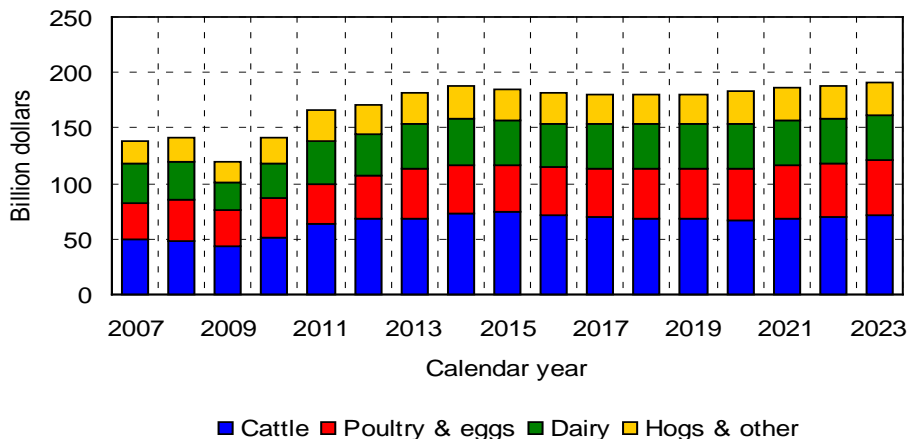
# Farm receipts and expenses

Program crop receipts decline from 2012 record



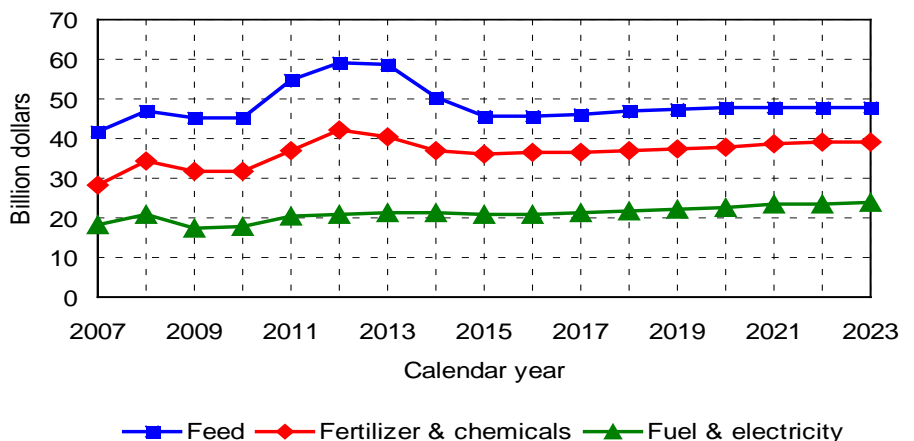
- Cash receipts from sales of program crops (grains, oilseeds, cotton and sugar) increased by \$64 billion between 2007 and 2012.
- Lower prices result in a \$39 billion drop in program crop receipts between 2012 and 2015.
- Receipts for other crops (including vegetables, fruits, nursery crops, hay and biomass crops) may dip slightly in 2014.
- The California drought adds much uncertainty to the 2014 projections.

Cattle and dairy receipts rise again in 2014



- Higher prices result in a further increase in cattle and dairy receipts in 2014.
- Hog and poultry receipts may not increase in 2014, but lower feed costs should help producer profit margins.
- Total livestock receipts decline slightly in 2015 and 2016.
- Milk, hog and poultry prices all decline in 2015, and cattle prices fall back from record levels beginning in 2016.

Feed and fertilizer expenses decline



- The pace of increase in farm production expenses slowed in 2013, and a decline is projected for 2014 and 2015.
- Feed costs more than doubled between 2005 and 2012, but are projected to decline by \$13 billion between 2013 and 2015.
- Fertilizer and chemical costs also nearly doubled between 2005 and 2012. Lower fertilizer prices contribute to lower costs in 2013 and 2014.

## Farm cash receipts

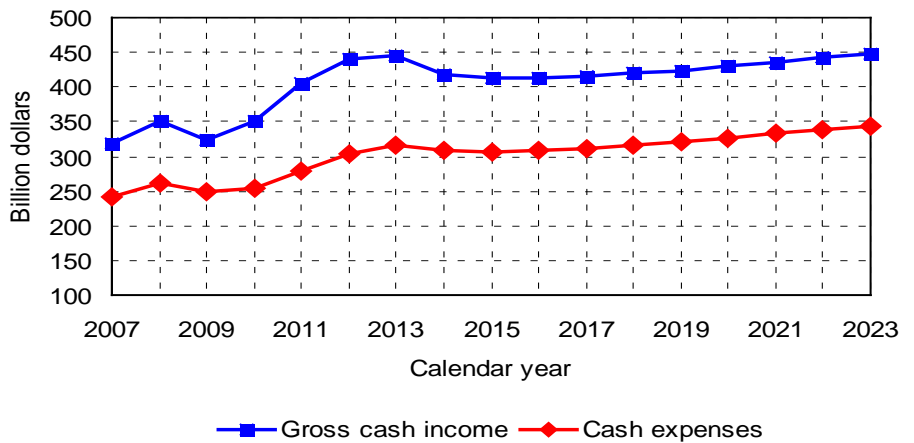
Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	(Billion dollars)										
Feed grains	71.28	62.16	59.12	59.05	59.89	60.82	61.66	62.09	62.17	62.36	62.50
Food grains	17.68	15.14	14.13	13.88	13.93	13.93	13.90	13.93	13.98	14.04	14.08
Oilseeds	43.60	37.40	33.42	33.13	33.43	33.91	34.51	35.10	35.64	36.01	36.29
Cotton	5.32	5.53	5.62	5.66	5.64	5.71	5.77	5.78	5.81	5.87	5.88
Sugar	2.88	2.53	2.69	2.75	2.79	2.80	2.80	2.80	2.80	2.80	2.79
Other crops	75.37	72.09	73.95	76.15	78.46	80.73	82.86	85.07	87.41	89.67	92.02
Cattle	68.85	73.10	73.99	71.46	69.97	68.67	67.64	67.44	68.73	69.84	71.09
Hogs	23.17	23.19	22.60	21.67	21.35	21.62	22.09	22.80	23.36	23.35	23.23
Dairy products	40.23	42.38	40.14	39.47	39.42	39.65	39.78	40.05	40.27	40.77	41.13
Poultry, eggs	44.47	43.13	42.45	42.89	43.73	44.72	45.63	46.61	47.56	48.50	49.43
Other livestock	5.47	5.58	5.60	5.60	5.63	5.70	5.76	5.86	5.97	6.07	6.17
Total cash receipts	398.30	382.24	373.72	371.70	374.26	378.27	382.41	387.52	393.70	399.30	404.61

## Farm production expenses

Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	(Billion dollars)										
Feed	58.68	50.47	45.68	45.76	46.26	46.82	47.36	47.74	47.81	47.94	47.94
Purchased livestock	23.81	27.07	27.50	25.87	25.03	24.07	23.36	23.13	23.64	24.04	24.57
Seed	21.27	21.59	21.35	21.42	21.61	21.97	22.43	22.92	23.49	23.95	24.28
Fertilizer and chemicals	40.25	36.88	36.05	36.35	36.69	37.05	37.23	37.75	38.60	38.98	39.31
Fuels and electricity	21.16	21.23	20.75	20.86	21.21	21.77	22.24	22.76	23.33	23.65	23.99
Interest	16.61	17.43	18.16	19.50	20.96	21.77	22.36	22.93	23.50	23.97	24.45
Contract and hired labor	34.00	35.06	35.99	37.07	38.18	39.31	40.47	41.64	42.81	44.03	45.28
Capital consumption	35.01	35.72	36.19	36.57	36.87	37.15	37.44	37.81	38.28	38.78	39.34
Rent to non-operators	17.23	17.07	16.68	16.44	16.35	16.38	16.40	16.43	16.45	16.46	16.48
All other	84.16	84.55	85.34	86.87	88.47	90.20	91.84	93.68	95.77	97.66	99.62
Total production expenses	352.17	347.08	343.70	346.71	351.62	356.49	361.13	366.77	373.68	379.46	385.26

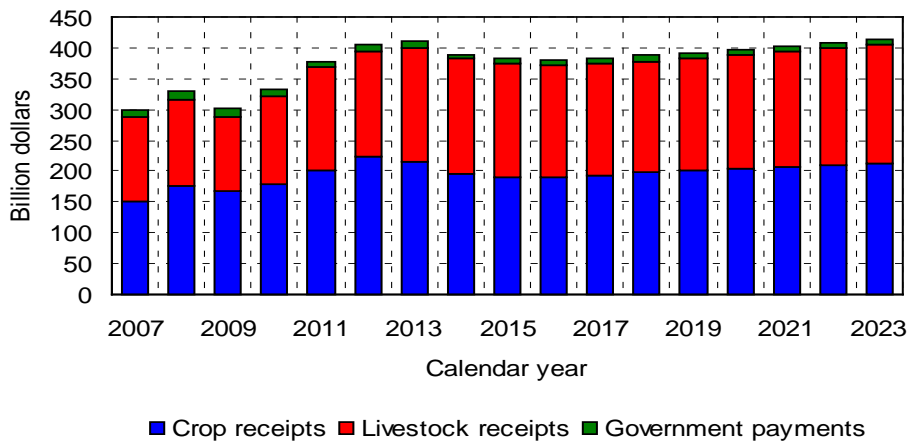
# Farm income

Cash income and expenses decline in 2014



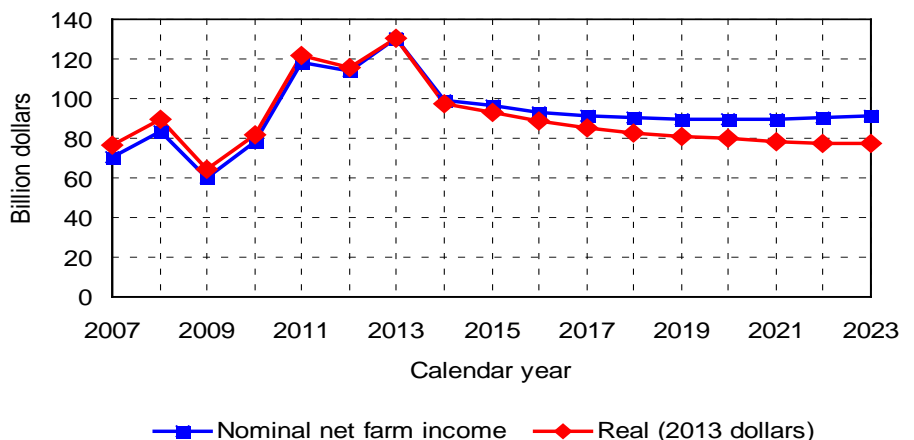
- Gross cash income (sales receipts and government payments) edged up in 2013 after three years of rapid growth.
- A larger increase in cash expenses in 2013 left net cash income slightly down from the 2012 record level.
- In 2014, the expected decline in gross farm income is much greater than the slight decline in cash expenses.
- Net cash income averages about \$105 billion per year for 2014-2023.

Crop receipts fall in 2014, livestock rise



- After years of rapid growth, crop receipts fell slightly in 2013. Crop receipts drop far more sharply in 2014 and then slightly in 2015.
- Livestock receipts increase slightly in 2014 to a new record, but then fall back.
- Government payments decline temporarily in 2014. Direct payments have ceased, and any PLC and ARC benefits for the 2014 crop will not be paid until 2015.

Net farm income declines sharply in 2014



- Net farm income reached record levels in 2013 in nominal dollars, and was at the highest level since the 1970s in inflation-corrected real dollars.
- In 2014, sharply lower crop receipts, lower government payments and smaller additions to inventories all contribute to a large decline in net farm income.
- Nominal net farm income levels out after 2017 at about \$90 billion per year. Real net farm income continues to decline, falling back to the 2007 level by 2023.

## Farm income statistics

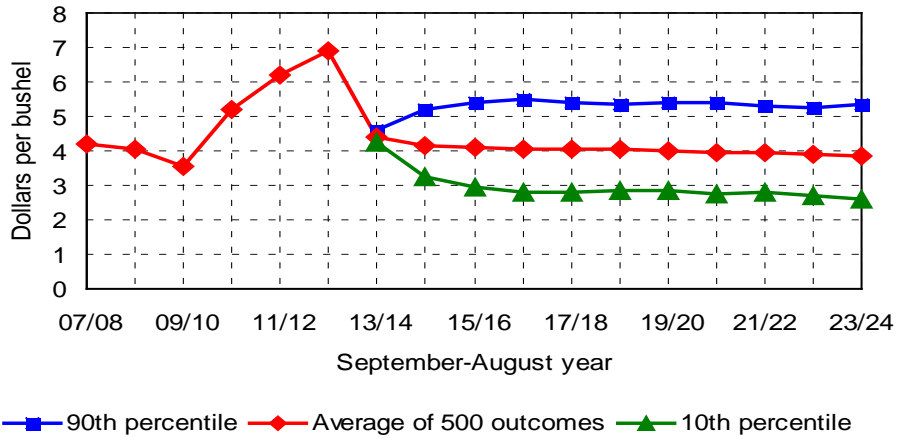
Calendar year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
	(Billion dollars)										
1. Farm receipts	434.04	412.74	404.01	402.43	405.33	409.74	414.25	419.74	426.35	432.32	438.10
Crops	216.12	194.86	188.93	190.62	194.15	197.90	201.50	204.77	207.80	210.76	213.57
Livestock	182.19	187.38	184.78	181.08	180.11	180.37	180.91	182.76	185.89	188.54	191.05
Farm-related	35.73	30.50	30.29	30.72	31.07	31.47	31.84	32.22	32.65	33.03	33.49
2. Government payments	11.20	6.01	8.50	9.70	10.02	9.75	9.57	9.83	9.78	9.89	10.13
3. Gross cash income (1 + 2)	445.24	418.75	412.51	412.13	415.34	419.48	423.82	429.57	436.13	442.21	448.23
4. Nonmoney income	24.98	26.22	26.77	26.92	26.99	27.01	27.11	27.40	27.91	28.44	29.02
5. Value of inventory Change	12.46	1.49	0.69	1.05	0.66	0.18	-0.24	-0.79	-0.68	-0.86	-0.54
6. Gross farm income (3 + 4 + 5)	482.67	446.46	439.97	440.10	443.00	446.67	450.69	456.17	463.37	469.79	476.71
7. Cash expenses	315.13	309.14	305.18	307.75	312.31	316.85	321.14	326.33	332.66	337.83	342.95
8. Total expenses	352.17	347.08	343.70	346.71	351.62	356.49	361.13	366.77	373.68	379.46	385.26
9. Net cash income (3 - 7)	130.11	109.61	107.33	104.37	103.04	102.64	102.68	103.24	103.47	104.38	105.28
10. Realized net farm inc (3 + 4 - 8)	118.04	97.89	95.59	92.34	90.71	90.00	89.79	90.20	90.37	91.20	91.99
11. Net farm income (6 - 8)	130.50	99.38	96.27	93.39	91.38	90.18	89.56	89.40	89.69	90.34	91.45
Deflated (2013 \$)	130.50	97.80	93.20	88.92	85.58	83.04	81.15	79.65	78.53	77.77	77.39



# Ranges from the 500 alternative futures

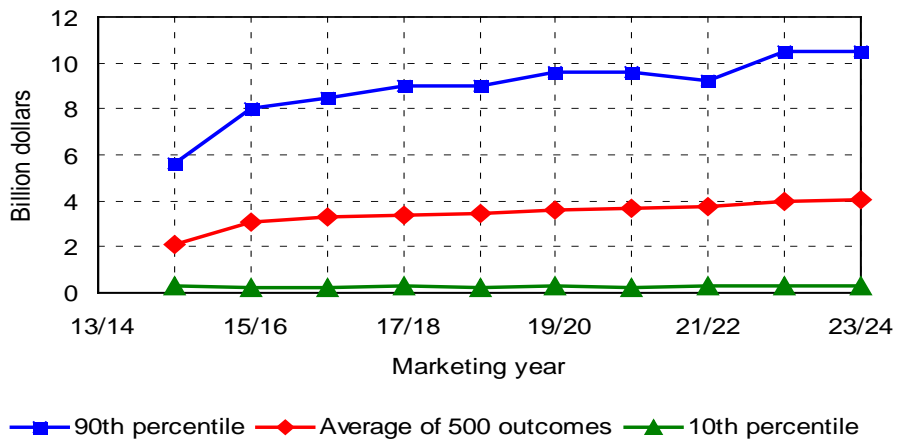
Corn prices depend on weather and much more

- Corn prices depend on weather, energy prices, income growth and much more.
- To examine alternative futures for agricultural markets, we considered 500 different combinations of assumptions about factors driving commodity prices.
- Although corn prices average about \$4 per bushel across the stochastic outcomes, there are some combinations of assumptions that lead to prices over \$5 per bushel and some where prices drop below \$3 per bushel in any given year.



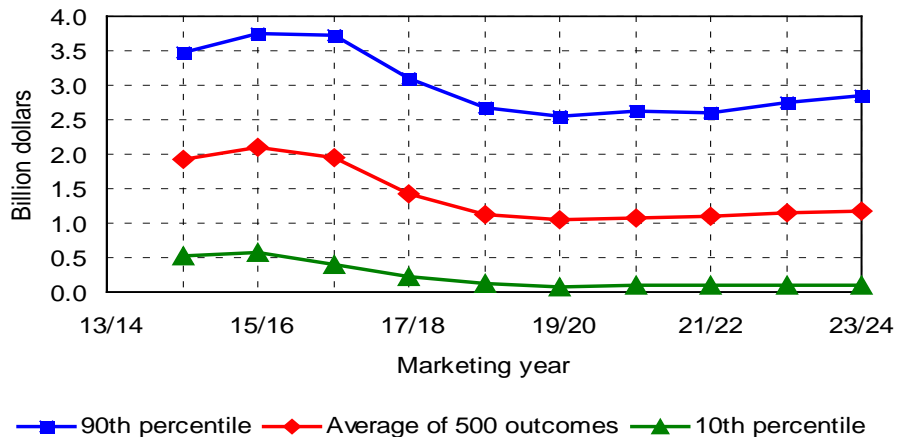
PLC program costs are uncertain

- PLC program costs are uncertain. If season-average market prices are above reference prices, no payments occur, but payments can be large if prices drop far below reference prices.
- Given all the assumptions of this analysis, average PLC costs increase from about \$2 billion for the 2014/15 crop to about \$4 billion for the 2023/24 crop.
- In some of the stochastic outcomes program spending is near zero. In others, it is more than twice the average level.



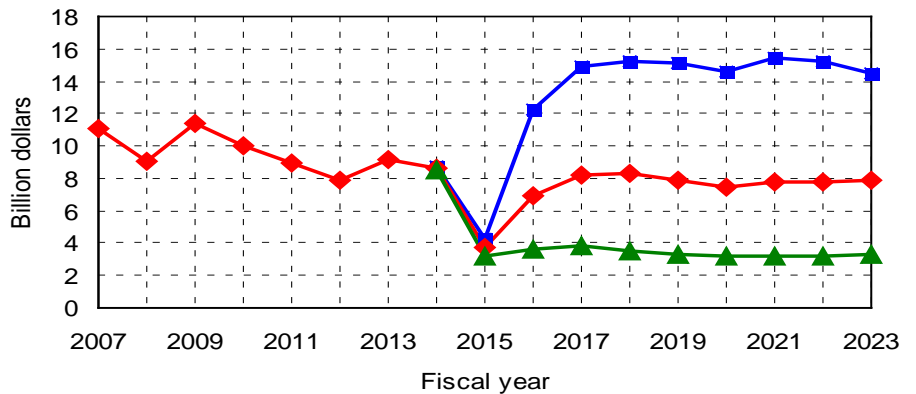
ARC payments can also vary greatly

- Given assumed participation rates and the projected paths of average market prices and yields, average ARC payments average about \$2 billion per year in the first three years of the program but decline to just over \$1 billion in later years.
- As with PLC, spending can be far above or below the average in any given year.
- The provision that limits ARC payments to 10 percent of the benchmark revenue per acre puts an upper cap on program payments.



# Ranges from the 500 alternative futures

CCC net outlays could vary greatly from averages

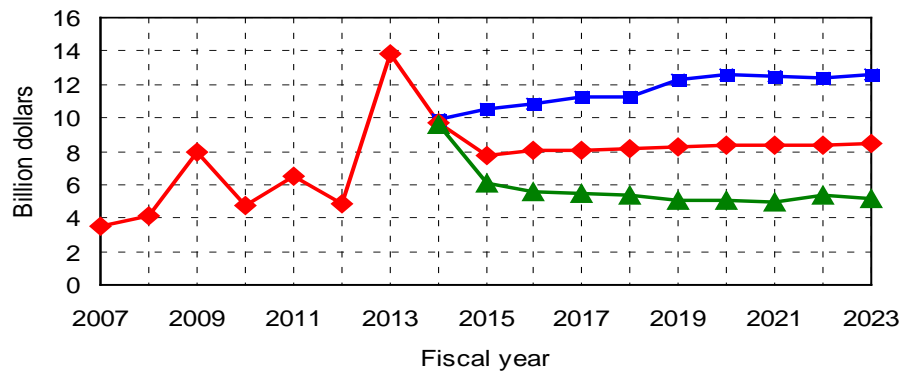


■ 90th percentile    ◆ Average of 500 outcomes    ▲ 10th percentile

- Given the uncertainty over spending on the new PLC and ARC programs, net CCC outlays can be far greater or less than the projected average.
- Average net CCC outlays are below the levels of recent years, and if prices and revenues are far above average, the conservation reserve program may be the only major CCC outlay.

- In contrast, low prices or per-acre revenues could trigger payments that exceed the levels of recent years.

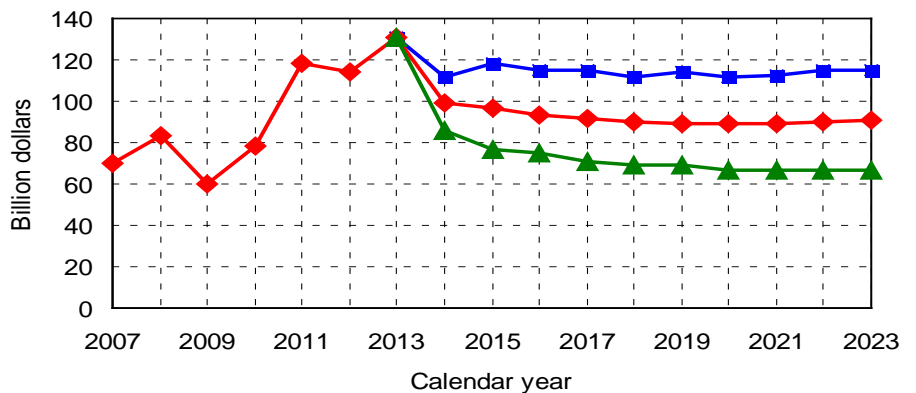
Crop insurance net outlays are also uncertain



■ 90th percentile    ◆ Average of 500 outcomes    ▲ 10th percentile

- Volatility in commodity yields and prices creates uncertain outlays for the crop insurance program.
- Higher crop prices, production and coverage levels increase crop insurance premiums and premium subsidies.
- In any given year, outlays will depend on yields, prices and resulting indemnities.
- In extreme weather years, indemnities and outlays can far exceed the average, as in FY 2013.

Net farm income likely to remain below 2013 record



■ 90th percentile    ◆ Average of 500 outcomes    ▲ 10th percentile

- Net farm income depends on production levels and the prices of agricultural outputs and inputs, all of which are uncertain.
- As a result, future levels of net farm income are also quite uncertain.
- The sources of uncertainty considered in this analysis lead to a wide range of possible farm income levels for any given year.
- There are certain to be risks not captured in these 500 alternative futures.