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US Baseline Briefing Book

Projections for agricultural and biofuel markets

FAPRI-MU Report #03-08

Providing objective analysis for over 20 years

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2008 US Baseline Briefing Book

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Foreword

The Food and Agricultural Policy Research Institute (FAPRI) provides analysis of agricultural and biofuel markets and policies for Congress and other decision makers. This report presents a summary of ten-year baseline projections for US agricultural and biofuel markets.

Process and Assumptions

In November 2007, FAPRI analysts prepared a preliminary set of projections that were later reviewed at a workshop in Washington, DC in December 2007. Reviewer comments and other new information were incorporated into this revised baseline prepared in January and February 2008.

The baseline is not a forecast of what will happen, but rather a projection of what could happen if current policies remain in place. In the absence of a new farm bill, the analysis assumes a continuation of the provisions of the current farm bill, the Farm Security and Rural Investment Act (FSRIA) of 2002. The baseline incorporates provisions of the Energy Independence and Security Act (EISA), the energy bill signed into law in December 2007. We assume that expiring biofuel tax and tariff provisions will be extended. We also evaluate a scenario that assumes the taxes and tariffs expire as scheduled in current law.

Assumptions about the wider economy rely primarily on January 2008 forecasts by Global Insight, Inc.

Things to Look for This Year

Prices for many agricultural commodities have increased sharply over the last two years. This report explains why prices have increased and discusses what to expect in the future.

- •Biofuel production is increasing at a rapid pace, with wide-ranging implications.
- •Petroleum prices and biofuel policies will drive future biofuel developments.
- •Export demand for many US agricultural products has been very strong.
- •Part of the increase in prices can be explained by short-term factors, such as unfavorable weather that reduced 2007 yields in competing grain exporters.
- •Much of the increase is explained by long-term factors, so we expect prices for most commodities to remain above pre-2006 levels.

Future developments in agricultural markets appear even more uncertain than in past years. FAPRI recognizes this uncertainty and considers 500 alternative outcomes for the future built on different assumptions about the price of petroleum, the weather and other factors that will affect the supply and demand for agricultural commodities. The tables which follow generally report the averages of the 500 alternative outcomes.

Acknowledgments

The FAPRI US Baseline Briefing Book for 2008 was prepared by the FAPRI unit in the College of Food, Agriculture and Natural Resources (CAFNR) at the University of Missouri–Columbia (MU), with the help of numerous colleagues at other institutions. The FAPRI team at Iowa State University took the lead in developing estimates related to international markets and the crop insurance program. Colleagues at the University of Arkansas took primary responsibility for developing rice market projections and others at Arizona State University developed projections for fruit and vegetable markets. We worked with colleagues at Texas Tech University in developing cotton market projections. Finally, the team at the Agriculture and Food Policy Center (Texas A&M) translated these national results into estimates of effects for representative farms around the country. We thank all of our colleagues and reviewers for their help in this collaborative project and we take responsibility for any mistakes.

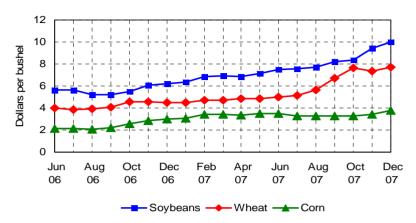
Summary: Issues in the short-term

- •Prices for grains and oilseeds increased sharply in late 2006 and 2007.
- ■These higher prices increased crop producer revenue, reduced the cost of certain government farm programs, increased feed costs for livestock producers and contributed to higher consumer food prices.

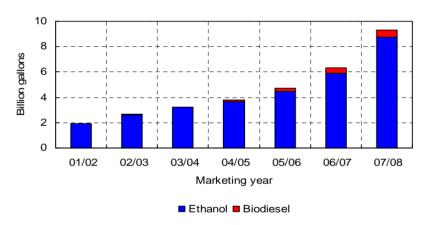
- Rising petroleum prices and supportive policies have resulted in a large increase in biofuel production.
- •As of February 22, 2008, installed ethanol production capacity was 8.2 billion gallons and another 5.2 billion gallons of capacity was under construction, according to the Renewable Fuels Association.

- •US exports of wheat and other grains have increased for reasons ranging from reduced grain yields in Europe, Canada and Australia to strong foreign economic growth and a weak dollar.
- Soybean production declined in 2007 because of a shift in acreage from soybeans to corn.
- Strong foreign demand means 2007/08 soybean exports exceed 2005/06 levels in spite of much higher soybean prices.

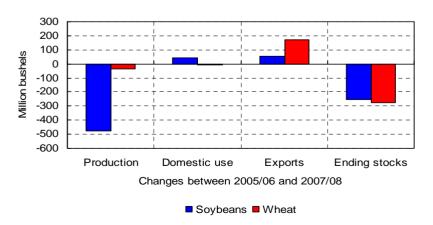
Crop prices have increased



Growth in biofuel production is one reason why



Export demand and other factors also contributed



Summary: Issues in the short-term

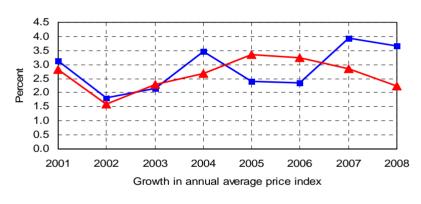
- •Higher prices for corn, soybean meal and hay have increased feed costs for all livestock producers.
- •Energy-related and labor costs have also increased rapidly in the past couple of years for livestock producers.
- •Livestock and milk prices will need to increase to mitigate these higher cost levels.

- •Consumer food prices rose more rapidly than the overall consumer price index in 2007.
- •Higher farm commodity prices and higher transportation costs were two of the factors contributing to the increase in food prices in 2007.
- •Consumer food price inflation is expected to outpace general inflation again in 2008.
- The expectation of higher corn prices contributed to a 15 million acre increase in corn area in 2007, a 12 million acre reduction in soybean area, and a four million acre drop in upland cotton area.
- Sharply higher prices for soybeans and wheat will result in higher projected acreage for both crops in 2008. Corn and cotton acreage both decline.

Livestock expenses are on the rise

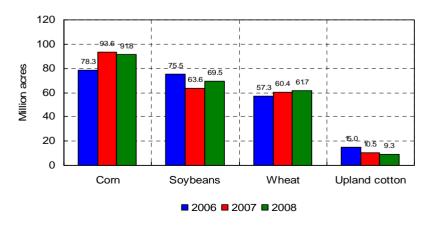
	•		
	2002-06	2007	2008
Cow-Calf		Dollars per cow	
Receipts	562.89	573.02	548.26
Feed costs	128.31	152.27	143.41
Nonfeed costs	324.41	386.77	389.60
Returns	110.17	33.97	15.25
Pork		Dollars per cwt	
Receipts	45.97	48.20	45.12
Feed costs	22.21	25.76	33.18
Nonfeed costs	18.20	21.28	21.79
Returns	5.56	1.16	-9.84
Milk			
Receipts	14.21	19.15	17.38
Feed costs	7.70	9.56	10.21
Nonfeed costs	5.17	5.79	6.14
Returns	1.34	3.80	1.04

Consumer food inflation increased in 2007



Consumer price index for food — Overall consumer price index

Planted acreage responds to economic signals



Summary: Issues in the longer term

■The baseline incorporates provisions of the Energy Independence and Security Act (EISA), which was signed into law in December 2007.

- EISA mandates minimum levels of use of various classes of biofuels.
- Actual biofuel production levels depend not just on EISA mandates, but also on petroleum prices and other factors.

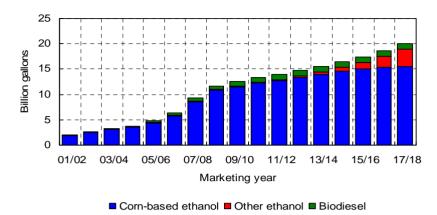
•Strong demand for biofuels and exports keeps projected average crop prices above pre-2006 levels.

- •Average wheat prices fall back from 2007/08 levels as yields in other countries recover.
- Average upland cotton prices increase slightly from 2007/08. Lower projected 2008/09 production reduces large ending stocks.

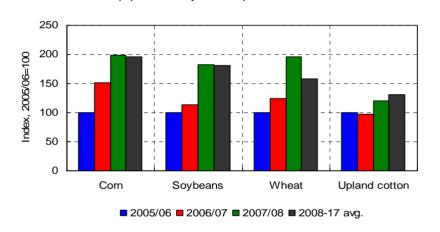
•Meat production grew by more than two percent per year in the 1980's and 1990's.

- The rate of growth slowed from 2002 to 2007 because BSE limited cattle imports from Canada and market developments slowed chicken industry expansion.
- Though cattle imports from Canada have returned to pre-BSE levels, high input costs will constrain meat production growth for the foreseeable future.

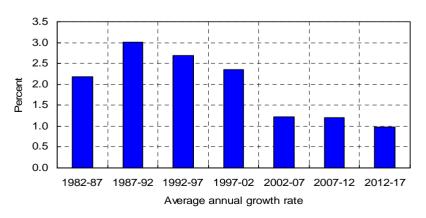
Biofuel production growth continues



Crop prices stay above pre-2006 levels



Meat production growth slows

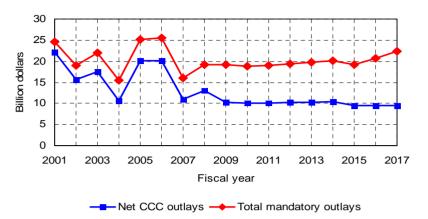


Summary: Issues in the longer term

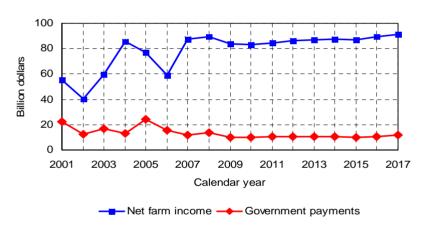
- Higher crop and milk prices sharply reduced Commodity Credit Corporation (CCC) outlays on government farm programs in fiscal year (FY) 2007.
- Disaster program spending results in higher CCC outlays in FY 2008. CCC outlays average around \$10 billion per year after FY 2008.
- High prices increase crop insurance outlavs and conservation program spending also increases over time.
- •In nominal terms, net farm income is at or near record levels in 2007 and 2008.
- Higher crop prices resulted in a sharp increase in cash receipts that more than offset the rise in production expenses.
- Government payments are a declining share of farm income.

- •The baseline assumes biofuel tax credits and tariffs will be extended when they are scheduled to expire.
- •If the credits and tariffs expire on schedule, the result will be lower ethanol production, prices and consumption, higher ethanol imports, and lower corn prices.
- See page 64 for more detail on the effects of biofuel credits and tariffs.

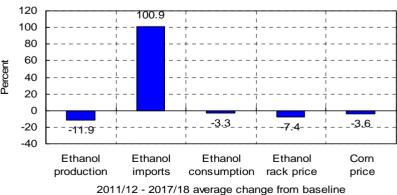
High prices reduce CCC outlays



Net farm income has reached record levels



Not extending biofuel credits would affect markets



Policy assumptions

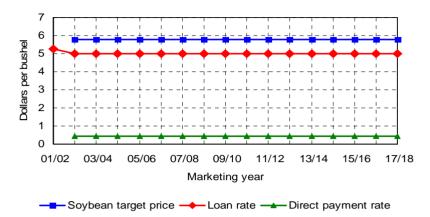
•The baseline assumes provisions of the current farm bill, the Farm Security and Rural Investment Act (FSRIA) of 2002.

- •Farm bill provisions set to expire are assumed to continue throughout the baseline.
- Loan rates, target prices, and direct payment rates are all held constant between 2007/08 and 2017/18.

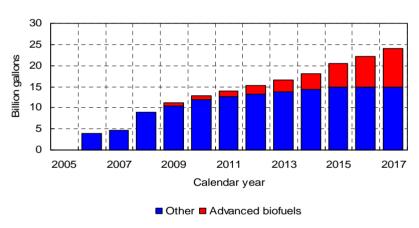
•The baseline incorporates the EISA, which mandates minimum levels of biofuel use.

- •We assume that authority to waive the cellulosic ethanol mandate is utilized, but all other mandates are enforced.
- •The baseline assumes biofuel tax credits and tariffs are extended when they would otherwise expire.
- •An alternative scenario where the tax provisions expire as scheduled is described beginning on page 64.
- •The area enrolled in the Conservation Reserve Program (CRP) is less than the statutory maximum of 39.2 million acres.
- •Many CRP contracts are set to expire over the next several years.
- •Because of strong crop returns, the baseline assumes that some of the expiring contracts are not renewed, so total CRP area falls from 36.8 million acres in 2007 to 30 million acres in 2010.

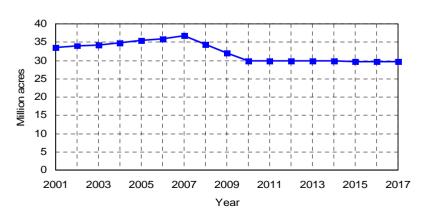
2002 farm bill provisions are extended



Energy bill mandates biofuel use



CRP area declines



Crop program provisions, 2007-2017

	Direct p	Direct payment		rate	Targe	t price	Direct payment yield		CCP yield		2008 base
	Level	Units	Level	Units	Level	Units	Level	Units	Level	Units	Mil. acres
Corn	0.28	\$/bu.	1.95	\$/bu.	2.63	\$/bu.	102.4	bu./a.	114.4	bu./a.	86.74
Sorghum	0.35	\$/bu.	1.95	\$/bu.	2.57	\$/bu.	56.6	bu./a.	58.2	bu./a.	11.82
Barley	0.24	\$/bu.	1.85	\$/bu.	2.24	\$/bu.	47.6	bu./a.	48.6	bu./a.	8.59
Oats	0.02	\$/bu.	1.33	\$/bu.	1.44	\$/bu.	48.4	bu./a.	49.8	bu./a.	3.05
Wheat	0.52	\$/bu.	2.75	\$/bu.	3.92	\$/bu.	34.5	bu./a.	36.1	bu./a.	74.85
Rice	2.35	\$/cwt.	6.50	\$/cwt.	10.50	\$/cwt.	4,820	lb./a.	5,128	lb./a.	4.48
Soybeans	0.44	\$/bu.	5.00	\$/bu.	5.80	\$/bu.	30.8	bu./a.	34.1	bu./a.	52.04
Sunflower seed	0.80	cents/lb.	9.30	cents/lb.	10.10	cents/lb.	1,086	lb./a.	n.a.	lb./a.	1.83
Canola	0.80	cents/lb.	9.30	cents/lb.	10.10	cents/lb.	1,040	lb./a.	n.a.	lb./a.	0.72
Peanuts	1.80	cents/lb.	17.75	cents/lb.	24.75	cents/lb.	2,992	lb./a.	2,992	lb./a.	1.51
Upland cotton	6.67	cents/lb.	52.00	cents/lb.	72.40	cents/lb.	599	lb./a.	634	lb./a.	18.39
Raw cane sugar	n.a.	n.a.	18.00	cents/lb.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Refined beet sugar	n.a.	n.a.	22.90	cents/lb.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Other program provisions

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Dairy					(Dollars p	er hundred	dweight)				
Milk support price	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90	9.90
Average MILC payment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
					(M	illion acres	5)				
Conservation reserve	36.80	34.50	31.97	29.96	29.90	29.83	29.79	29.79	29.78	29.76	29.73
					(Mil	lion gallon	s)				
Renewable fuel standard	4,700	9,000	11,100	12,950	13,950	15,200	16,550	18,150	20,500	22,250	24,000
Advanced biofuels	0	0	600	950	1,350	2,000	2,750	3,750	5,500	7,250	9,000
Cellulosic ethanol (waived)	0	0	0	100	250	500	1,000	1,750	3,000	4,250	5,500
Biodiesel	0	0	500	650	800	1,000	1,000	1,000	1,000	1,000	1,000
Biofuel taxes and tariffs					(Dolla	ars per gal	on)				
Ethanol tax credit	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Biodiesel tax credits											
Pre-consumer oils, fats	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Post-consumer oils, fats	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Ethanol specific tariff	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
						(Percent)					
Ethanol ad valorem tariff	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Macroeconomic assumptions and farm prices paid

•Petroleum prices have more than tripled since 2002.

- Based on Energy Information Administration and Global Insight forecasts, West Texas intermediate petroleum prices fall from \$87 per barrel in 2008 to \$71 per barrel in 2017.
- •The stochastic analysis uses a range of petroleum prices centered on these forecasts, as described on page 68.

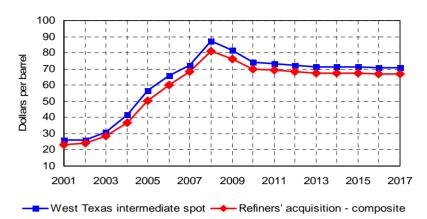
•The dollar weakened for the fifth consecutive year against most international currencies during 2007.

- •Global Insight projects further weakening of the dollar in 2008, with a modest strengthening against major currencies from 2009-2013.
- •US agricultural exports benefit from a weaker dollar, as the price of US products, in terms of foreign currency, is reduced.

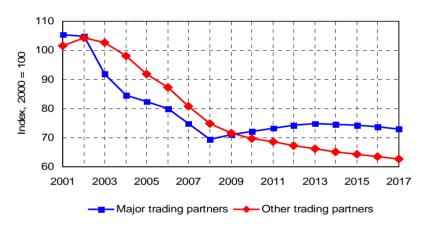
•Fertilizer prices have more than doubled since 2002.

- •If energy prices stabilize or fall as projected, future growth in fertilizer prices may slow.
- •Wages and other labor costs are a major component in farm production costs and in the costs of processing, transporting and merchandising food.

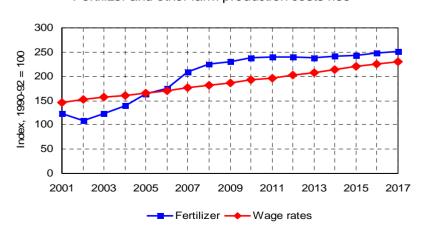
Projected petroleum prices decline slightly



The dollar is weaker in inflation-adjusted terms



Fertilizer and other farm production costs rise



Macroeconomic assumptions

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
				(Perce	entage cha	nge from p	revious ye	ear)			
Real GDP	2.2	1.9	2.7	2.8	2.9	2.5	2.3	2.3	2.4	2.4	2.4
Population growth	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	8.0	0.8	0.8
CPI, all urban consumers	2.9	2.2	1.6	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9
PPI, all commodities	4.8	2.5	1.5	1.4	0.8	0.5	0.1	8.0	1.0	1.1	1.0
Wages & salaries	3.4	2.9	2.8	2.9	3.0	3.1	3.0	2.9	2.8	2.8	2.7
					(Percent)					
Unemployment rate	4.6	5.1	5.1	5.0	4.8	4.7	4.8	4.9	4.9	4.9	4.8
3-month Treasury bill rate	4.4	3.1	3.8	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
AAA bond rate	5.6	5.2	5.7	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Petroleum prices					(Dolla	rs per barı	el)				
West Texas intermediate	72.34	87.21	81.67	74.02	73.42	72.27	71.54	71.31	71.40	71.05	71.00
Refiners' acquisition cost	68.27	80.92	76.15	69.82	69.26	68.19	67.50	67.29	67.37	67.05	67.00
Inflation-adj. exchange rate					(Inde	x, 2000=10	00)				
vs. major trading partners	74.8	69.4	71.1	72.2	73.3	74.4	74.8	74.6	74.3	73.8	72.9
vs. other trading partners	80.9	75.0	71.5	69.7	68.6	67.3	66.2	65.2	64.4	63.6	62.8
Foreign real GDP growth				(Perce	entage cha	nge from p	orevious ye	ear)			
Major trading partners	2.6	2.2	2.2	2.3	2.3	2.3	2.1	2.1	2.0	2.0	2.0
Other trading partners	5.6	5.2	5.2	5.1	4.9	4.7	4.5	4.5	4.4	4.5	4.4

Source: Global Insight, Inc., Jan. 2008, except petroleum prices for 2008 and 2009 are based on Energy Information Administration estimates.

Indices of prices paid by farmers

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Product. items, interest,					(199	90-92=100)				
taxes and wages	158	163	164	166	168	171	173	175	178	181	184
Production items	156	165	166	167	169	172	174	177	180	184	187
Feed	151	179	167	164	165	166	166	166	166	165	164
Livestock & poultry	130	121	123	124	124	127	129	131	131	133	135
Seeds	205	214	219	224	228	232	234	239	244	250	255
Fertilizer	209	225	230	239	240	240	238	241	244	248	252
Mixed fertilizer	191	206	211	219	222	223	224	226	230	234	238
Nitrogen fertilizer	231	251	255	266	266	264	258	259	263	268	273
Potash and phosph.	195	209	214	221	224	226	228	231	235	238	242
Agricultural chemicals	130	133	134	136	137	139	140	143	146	148	151
Fuels	263	293	284	271	270	268	265	266	268	269	271
Supplies & repairs	150	154	157	160	163	167	170	174	178	183	187
Autos & trucks	111	108	107	106	106	105	105	105	106	106	106
Farm machinery	189	193	197	202	208	214	221	229	238	247	255
Building material	155	156	158	161	163	166	168	172	176	180	184
Farm services	143	147	150	155	159	164	168	175	182	189	197
Rent	119	126	132	134	135	137	138	139	141	142	143
Interest*	151	150	160	172	176	178	180	183	187	189	191
Taxes**	171	179	186	193	198	201	203	208	212	217	222
Wage rates	177	182	187	193	197	203	208	214	220	225	231

^{*}Interest per acre on farm real estate debt and interest rate on farm non-real estate debt.

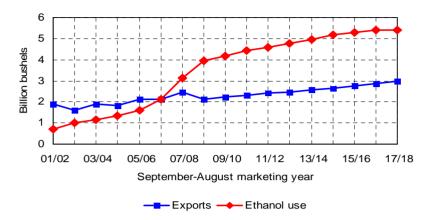
^{**}Farm real estate taxes payable per acre.

Corn

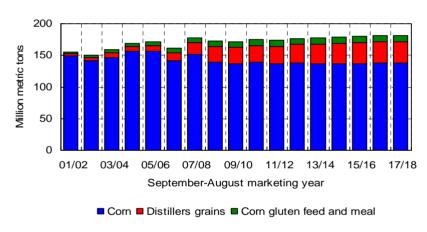
Ethanol use of corn almost doubled between 2005/06 and 2007/08 and will near four billion bushels in 2008/09.

- •Export demand for corn in 2007/08 has been surprisingly strong. Foreign supply response to high prices could lead to lower exports in 2008/09.
- •Given EISA provisions, high petroleum prices, a weak dollar, and foreign economic growth, both ethanol use and exports could grow after 2008/09.
- •Reported feed and residual use of corn dropped in 2006/07 and appears to likely rebound in 2007/08.
- •Growth in the feed use of distillers grains and other coproducts of ethanol production is likely to reduce feed use of corn in 2008/09.
- By 2015/16, almost as much corn is used to produce ethanol as is fed directly to US livestock.
- Sharply higher corn prices in 2006/07 and 2007/08 resulted in a large increase in producer market receipts.
- Marketing loan benefits and countercyclical payments (CCPs) would occur only if prices fell dramatically below average projected levels.
- In spite of rising variable production expenses, net returns to corn producers remain very high by historical standards. Variable expenses exclude land and other fixed costs.

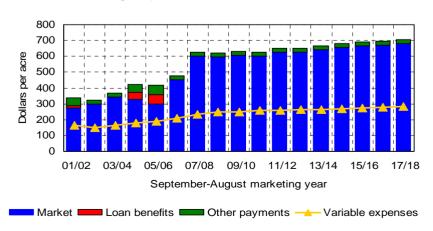
Ethanol use of corn surpasses exports



Use of corn coproducts limits feed use of corn



Higher prices increase corn returns



Corn supply and utilization

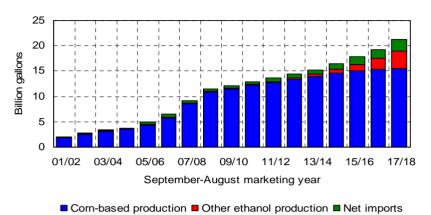
September-August year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(M	illion acres	s)				
Base area	86.7	86.7	86.8	86.9	86.9	86.9	86.9	86.9	86.9	86.9	86.9
Planted area	93.6	91.8	92.4	94.6	93.0	95.1	95.1	95.7	96.0	96.4	95.9
Harvested area	86.5	84.2	84.7	86.9	85.4	87.4	87.4	88.1	88.4	88.8	88.4
Yield					(Bus	hels per a	cre)				
Actual	151.1	153.5	155.5	157.8	159.9	162.0	164.1	166.5	168.6	170.9	173.0
Program, direct	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4	102.4
Program, CCP	114.4	114.4	114.4	114.4	114.4	114.4	114.4	114.4	114.4	114.4	114.4
					(Mil	lion bushe	ls)				
Supply	14,393	14,430	14,625	15,108	15,170	15,579	15,807	16,109	16,341	16,600	16,739
Beginning stocks	1,304	1,491	1,437	1,380	1,500	1,391	1,451	1,422	1,423	1,407	1,431
Production	13,074	12,924	13,173	13,713	13,655	14,173	14,341	14,672	14,903	15,178	15,292
Imports	15	15	15	15	15	15	15	15	15	15	15
Domestic use	10,456	10,857	10,994	11,296	11,373	11,655	11,815	12,030	12,175	12,295	12,322
Feed, residual	5,946	5,499	5,397	5,453	5,366	5,440	5,403	5,393	5,398	5,421	5,432
Fuel alcohol	3,149	3,968	4,186	4,418	4,573	4,769	4,960	5,176	5,308	5,395	5,398
HFCS	511	528	541	548	551	555	555	557	558	561	566
Seed	23	23	24	24	24	24	24	24	24	24	24
Food, other	827	838	845	854	859	868	874	880	887	894	901
Exports	2,445	2,137	2,252	2,313	2,406	2,474	2,570	2,656	2,758	2,874	2,997
Total use	12,901	12,994	13,245	13,608	13,779	14,128	14,385	14,686	14,934	15,169	15,319
Ending stocks	1,491	1,437	1,380	1,500	1,391	1,451	1,422	1,423	1,407	1,431	1,420
CCC inventory	0	0	0	0	0	0	0	0	0	0	0
Under loan	85	139	145	178	156	170	170	174	160	174	183
Other stocks	1,406	1,297	1,235	1,321	1,235	1,281	1,252	1,249	1,246	1,258	1,237
Prices and returns						(Dollars)					
Farm price/bu.	3.98	3.90	3.92	3.85	3.94	3.88	3.92	3.96	3.96	3.96	3.97
Loan rate/bu.	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Avg. LDP or MLG rate/bu.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Target price/bu.	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63
CCP rate/bu.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Direct payment/bu.	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Gross market revenue/a.	601.11	594.98	605.96	603.01	625.64	625.56	639.06	654.53	664.53	672.99	682.38
Marketing loan benefits/a.	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Variable expenses/a.	231.85	246.94	250.75	256.32	259.65	261.99	262.78	267.03	272.46	278.33	284.04
Market + MLB net returns/a.	369.26	348.04	355.21	346.70	365.99	363.56	376.27	387.50	392.07	394.67	398.34
CCP revenue/base a.	0.00	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Direct payment/base a.	24.37	24.37	24.37	24.37	24.37	24.37	24.37	24.37	24.37	24.37	24.37

Ethanol

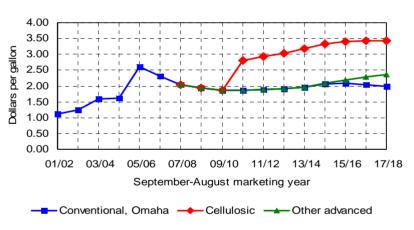
•Projected growth in corn-based ethanol production slows after 2008/09, but production still reaches 15 billion gallons by 2015/16.

- •Future levels of cellulosic production are very uncertain. Projected production falls short of the levels envisioned in EISA.
- Imported sugar-based ethanol is assumed to satisfy most of the renewable fuel standard for advanced ethanol not met by cellulosic ethanol or biodiesel.
- •Rack (wholesale) prices of ethanol decline until 2009/10 in order to encourage consumption as production exceeds EISA mandates.
- •In later years, ethanol rack prices increase in response to EISA mandates.
- •We assume the cellulosic ethanol mandate is waived.
- •Under EISA provisions, cellulosic ethanol producers therefore receive a subsidy equal to \$3.00 minus the wholesale price of gasoline.
- Additive uses of ethanol increased sharply when methyl tertiary butyl ether (MTBE) was replaced in the nation's fuel supply.
- Voluntary use of ten percent ethanol blends and E-85 must absorb increasing supplies unless other blends enter the market.
- Ethanol blends must be pricecompetitive with regular gasoline at retail to encourage the required increase in use.

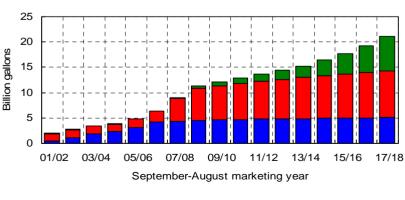
Ethanol supplies increase



Ethanol rack prices may differ under EISA rules



Ethanol consumption patterns change



■ Additive & mandatory ■ Voluntary 10% blends ■ E-85

Ethanol supply and utilization

September-August year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Petroleum fuel prices					(Dolla	ars per bar	rel)				
Petroleum, W. Texas interm.	87.49	83.52	76.57	73.62	72.65	71.78	71.39	71.37	71.17	71.02	71.00
Petroleum, ref. acquisition	81.39	77.74	71.93	69.45	68.55	67.73	67.36	67.34	67.15	67.01	67.00
					(Dolla	ars per gal	lon)				
Unl. gasoline, FOB Omaha	2.48	2.42	2.25	2.19	2.17	2.14	2.13	2.13	2.13	2.14	2.14
Unleaded gasoline, retail	3.10	3.05	2.89	2.83	2.81	2.80	2.79	2.81	2.82	2.83	2.83
Ethanol supply and use					(Mil	lion gallon	s)				
Production	8,741	11,049	11,705	12,413	12,948	13,651	14,417	15,391	16,339	17,492	18,963
From corn	8,601	10,898	11,558	12,258	12,751	13,366	13,971	14,652	15,100	15,421	15,507
From other feedstocks	141	141	129	122	117	116	117	126	135	145	153
Cellulosic	0	10	18	33	79	169	329	613	1,104	1,926	3,304
Net imports (ethyl alcohol)	406	470	437	540	690	772	872	1,133	1,450	1,795	2,247
Disappearance	9,024	11,394	12,101	12,915	13,611	14,387	15,252	16,478	17,740	19,225	21,132
Conventional	8,513	10,809	11,548	12,250	12,754	13,359	13,963	14,638	15,085	15,395	15,467
Cellulosic	0	10	18	33	79	169	329	613	1,104	1,926	3,304
Other advanced ethanol	511	575	534	632	778	859	960	1,228	1,551	1,904	2,362
Ending stocks	557	681	722	761	788	824	861	906	954	1,017	1,095
Ethanol prices					(Dolla	ars per gal	lon)				
Conventional rack, Omaha	2.04	1.95	1.86	1.86	1.89	1.91	1.97	2.06	2.08	2.04	2.00
Cellulosic rack	2.04	1.95	1.86	2.81	2.93	3.03	3.17	3.32	3.41	3.42	3.44
Other advanced rack	2.04	1.95	1.86	1.86	1.89	1.91	1.97	2.08	2.19	2.29	2.37
Effective retail	2.17	2.10	1.98	1.93	1.92	1.90	1.89	1.89	1.89	1.89	1.88
Ethanol/gasoline retail ratio	70%	69%	69%	68%	68%	68%	68%	67%	67%	67%	66%

Biofuel policies

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
					(Mil	lion gallon	s)				
Renewable fuel standard	4,700	9,000	11,100	12,950	13,950	15,200	16,550	18,150	20,500	22,250	24,000
Advanced biofuels	0	0	600	950	1,350	2,000	2,750	3,750	5,500	7,250	9,000
Cellulosic ethanol	0	0	0	100	250	500	1,000	1,750	3,000	4,250	5,500
Biodiesel	0	0	500	650	800	1,000	1,000	1,000	1,000	1,000	1,000
Taxes and tariffs					(Dolla	ars per gall	on)				
Ethanol tax credit	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Ethanol specific tariff	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
					((Percent)					
Ethanol ad valorem tariff	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

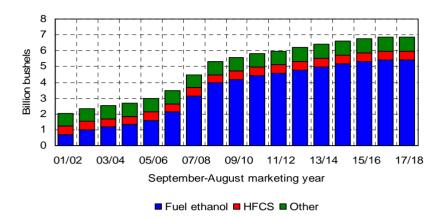
Corn processing

•Ethanol use accounts for most of the growth in corn food and industrial use.

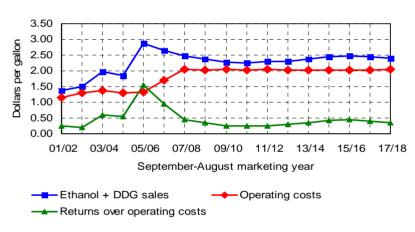
 High-fructose corn syrup (HFCS) and other food and industrial uses of corn grow slowly over time.

- •Falling ethanol prices and rising corn prices resulted in lower returns over operating costs for ethanol producers in 2006/07 and 2007/08.
- •From 2008-2017, net returns over operating costs average about \$0.33 per gallon. Operating costs exclude capital costs, so net profits would be lower.
- •The decline in returns explains the slowdown in plant capacity expansion.
- Actual net returns to ethanol production depend on petroleum prices, the weather and other uncertain factors.
- •For example, high petroleum prices may raise ethanol prices and net returns, while a drought could raise corn prices and reduce ethanol net returns.
- •All 500 alternatives assume current tax credits and other policies remain in place.

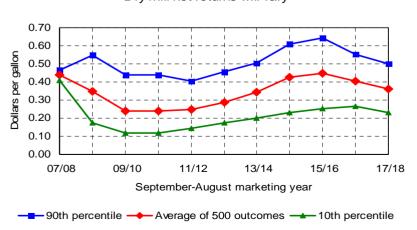
Ethanol dominates processing use of corn



Dry mill net returns have declined



Dry mill net returns will vary



Corn processing

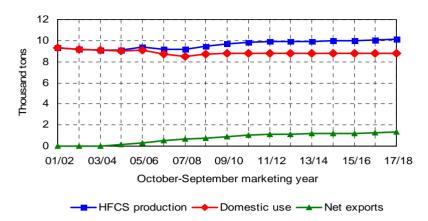
September-August year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Corn food, industrial use					(Mill	ion bushel	s)				
Fuel alcohol	3,149	3,968	4,186	4,418	4,573	4,769	4,960	5,176	5,308	5,395	5,398
HFCS	511	528	541	548	551	555	555	557	558	561	566
Glucose and dextrose	235	239	240	241	242	243	244	245	246	247	248
Starch	269	273	275	279	281	285	287	290	293	296	299
Beverage alcohol	134	135	137	138	139	140	142	143	144	145	146
Cereals and other	189	192	193	196	197	199	201	202	204	206	208
Total	4,487	5,334	5,572	5,819	5,983	6,191	6,389	6,613	6,753	6,850	6,865
Corn dry milling											
Corn dry milled for ethanol	2,566	3,319	3,532	3,735	3,874	4,050	4,221	4,411	4,525	4,600	4,601
(Share of total ethanol)	81.5%	83.6%	84.4%	84.5%	84.7%	84.9%	85.1%	85.2%	85.3%	85.3%	85.2%
Yields per bushel of corn					(Unit	s per bush	el)				
Ethanol (gallons)	2.74	2.76	2.77	2.79	2.80	2.82	2.83	2.85	2.86	2.88	2.89
Distillers grains (pounds)	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00
Costs and returns					(Dolla	ars per gall	on)				
Ethanol value	2.04	1.95	1.86	1.86	1.89	1.91	1.97	2.06	2.08	2.04	2.00
Distillers grains value	0.44	0.42	0.41	0.40	0.41	0.40	0.40	0.40	0.40	0.40	0.40
Corn cost	-1.45	-1.42	-1.41	-1.38	-1.41	-1.38	-1.39	-1.39	-1.39	-1.38	-1.37
Fuel and electricity cost	-0.27	-0.29	-0.30	-0.31	-0.31	-0.31	-0.30	-0.30	-0.30	-0.31	-0.31
Other operating costs	-0.32	-0.32	-0.33	-0.33	-0.33	-0.34	-0.34	-0.34	-0.35	-0.35	-0.35
Net operating return	0.44	0.35	0.24	0.24	0.25	0.29	0.34	0.42	0.45	0.41	0.36
Corn wet milling					(Mill	ion bushel	s)				
Corn wet milled for ethanol	582	649	654	683	698	718	739	765	783	794	798
(Share of total ethanol)	18.5%	16.4%	15.6%	15.5%	15.3%	15.1%	14.9%	14.8%	14.7%	14.7%	14.8%
Other corn wet milling	1,015	1,039	1,056	1,068	1,074	1,083	1,086	1,092	1,097	1,104	1,112
Total corn wet milling	1,597	1,688	1,710	1,751	1,772	1,801	1,826	1,857	1,880	1,898	1,910
Yields per bushel of corn					(Unit	s per bush	el)				
Ethanol (gallons)	2.69	2.70	2.71	2.71	2.72	2.73	2.74	2.74	2.75	2.76	2.77
Gluten feed (pounds)	11.40	11.40	11.40	11.40	11.40	11.40	11.40	11.40	11.40	11.40	11.40
Gluten meal (pounds)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Corn oil (pounds)	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Costs and returns					(Dolla	ars per gall	on)				
Ethanol value	2.04	1.95	1.86	1.86	1.89	1.91	1.97	2.06	2.08	2.04	2.00
Gluten feed value	0.22	0.21	0.20	0.20	0.20	0.20	0.20	0.19	0.19	0.19	0.19
Gluten meal value	0.24	0.23	0.21	0.20	0.20	0.20	0.19	0.19	0.19	0.19	0.18
Corn oil value	0.36	0.34	0.35	0.38	0.38	0.39	0.39	0.40	0.41	0.41	0.42
Corn cost	-1.48	-1.45	-1.45	-1.42	-1.45	-1.42	-1.43	-1.44	-1.44	-1.44	-1.44
Fuel and electricity cost	-0.21	-0.22	-0.23	-0.24	-0.24	-0.24	-0.23	-0.23	-0.23	-0.24	-0.24
Other operating costs	-0.51	-0.51	-0.52	-0.52	-0.53	-0.53	-0.54	-0.54	-0.55	-0.55	-0.56
Net operating return	0.67	0.56	0.43	0.46	0.46	0.50	0.55	0.63	0.65	0.61	0.56

Corn products

Projected US exports of HFCS grow to 1.3 million tons by 2017/18, with Mexico as the primary market.

- Domestic use of HFCS has declined since 2001/02. Projected per capita use declines slowly, leaving total domestic use flat.
- •HFCS wholesale prices have risen sharply the last two years and are only slightly lower than wholesale sugar prices.
- •Increasing dry mill ethanol production results in large additional supplies of distillers grains.
- •Most of the product is fed to US livestock, primarily beef and dairy cattle.
- •Exports have increased rapidly, but remain modest relative to total supplies.
- •The table reports the sum of wet and dried distillers grains and brewers grains on a dry-equivalent basis.
- •Over the long run, prices of distillers dried grains with solubles (DDGS) and corn gluten feed generally move with corn prices.
- Projected DDGS prices dip slightly below corn prices on a per-ton basis to encourage consumption of rapidly increasing supplies.

Exports grow as a share of HFCS use

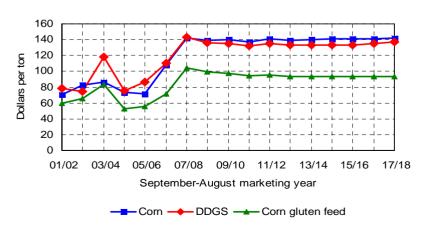


Supplies of distillers grains increase rapidly



■ Distillers & brewers grain production Domestic use Net exports

Coproduct feed prices generally move with corn



Corn product supply and utilization

Marketing year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
High-fructose corn syrup				(1	housand t	tons. Oct	Sep. year)				
Production	9,167	9,463	9,689	9,817	9,877	9,942	9,948	9,976	10,004	10,059	10,137
Domestic use	8,518	8,721	8,790	8,766	8,786	8,819	8,790	8,787	8,778	8,791	8,827
Net exports	649	742	899	1,051	1,091	1,124	1,159	1,189	1,226	1,269	1,310
						,	-Sep. year		, -	,	,
Price, 42% Midwest	20.23	21.21	21.33	21.28	21.49	21.60	21.64	22.06	22.19	22.21	22.27
Distillers, brewers grains				(Т	housand t	ons, Sep	Aug. year)				
Production (dry equivalent)	22,835	29,241	31,053	32,775	33,954	35,451	36,893	38,510	39,480	40,117	40,116
Domestic use	20,435	26,575	28,239	29,771	30,878	32,340	33,720	35,215	36,052	36,536	36,415
Net exports	2,400	2,666	2,814	3,005	3,075	3,110	3,172	3,296	3,428	3,581	3,701
				([Oollars per	ton, Sep	Aug. year)				
Price, Lawrenceburg, IN	142.69	136.55	134.80	131.88	135.09	132.92	132.95	132.77	133.41	134.79	136.82
Corn gluten feed				(T	housand t	ons, Sep	·Aug. year)				
Production	9,106	9,622	9,749	9,978	10,103	10,266	10,406	10,583	10,716	10,821	10,889
Domestic use	7,638	8,120	8,266	8,492	8,651	8,816	8,972	9,161	9,314	9,446	9,545
Net exports	1,467	1,502	1,483	1,486	1,452	1,451	1,434	1,422	1,402	1,375	1,344
				([Oollars per	ton, Sep	Aug. year)				
Price, 21%, IL points	104.55	99.24	97.22	94.32	95.76	93.87	93.70	93.51	93.30	93.20	93.62
Corn gluten meal				(T	housand t	ons, Sep	Aug. year)				
Production	2,396	2,532	2,565	2,626	2,659	2,702	2,738	2,785	2,820	2,848	2,866
Domestic use	1,339	1,454	1,464	1,510	1,528	1,560	1,584	1,620	1,644	1,660	1,667
Net exports	1,057	1,079	1,101	1,116	1,131	1,142	1,154	1,165	1,176	1,188	1,199
				([ollars per	ton, Sep	Aug. year)				
Price, 60%, IL points	439.25	416.78	381.16	370.32	360.48	359.77	353.80	351.34	348.76	342.16	337.09
Corn Oil				1)	Million pou	nds, Oct	Sep. year)				
Production	2,794	2,953	2,992	3,062	3,101	3,151	3,193	3,248	3,289	3,321	3,342
Domestic use	2,206	2,203	2,259	2,344	2,374	2,418	2,455	2,508	2,549	2,579	2,600
Net exports	665	733	734	727	728	731	736	739	740	742	743
Ending stocks	105	123	122	113	111	112	115	116	115	114	113
				(C	ents per p	ound, Oct.	-Sep. year)			
Chicago price	55.29	53.04	54.25	58.30	59.86	60.91	61.32	62.42	63.91	65.24	66.73

Sorghum and Barley

US sorghum exports have increased sharply in 2007/08 in response to tight global grain supplies and a large US sorghum crop.

- Assuming a return to normal weather conditions around the world, projected sorghum exports decline in 2008/09.
- Sorghum prices generally move with corn prices so that sorghum is competitive in feed rations.

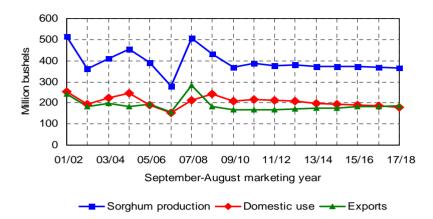
•High sorghum prices and record yields result in a large jump in the per-acre value of sorghum production in 2007/08.

- In 2008/09, projected sorghum prices decline and average sorghum yields return to the long-term trend.
- Sorghum net returns over variable expenses decline in 2008/09, but remain above levels that prevailed prior to 2007/08.

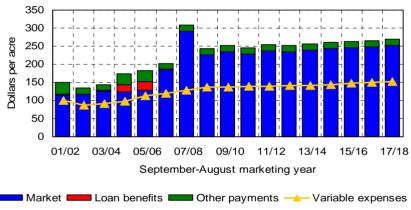
As with other grains, sharply higher barley prices in 2007/08 increase producer returns.

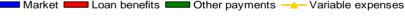
- Barley prices and returns remain high throughout the ten-year projection period.
- •The figure shows average barley returns. Malting and feed barley producers may have very different experiences than suggested by these allbarley averages.

Sorghum exports increased sharply in 2007/08

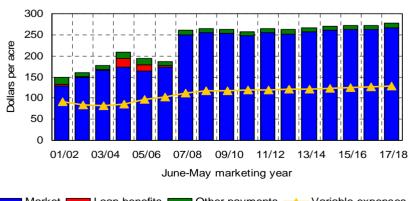


Prices, yields increase 2007/08 sorghum returns





Barley returns also increase



Sorghum supply and utilization

September-August year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(Mi	illion acres)				
Planted area	7.72	7.93	6.77	7.11	6.90	6.94	6.81	6.77	6.74	6.69	6.62
Harvested area	6.81	6.66	5.67	5.95	5.78	5.80	5.68	5.63	5.59	5.55	5.48
					(Busl	nels per ac	re)				
Yield	74.2	64.5	64.6	64.9	65.1	65.4	65.5	65.9	66.0	66.3	66.6
Supply and use					(Mill	ion bushel	s)				
Production	505	431	368	388	378	380	373	372	371	369	366
Imports	0	0	0	0	0	0	0	0	0	0	0
Domestic use	211	243	210	218	211	207	198	195	190	185	179
Exports	285	182	168	166	169	171	176	177	181	183	186
Ending stocks	41	47	36	40	38	40	39	40	40	40	41
Prices and returns						(Dollars)					
Farm price/bu.	3.94	3.53	3.66	3.56	3.66	3.62	3.68	3.72	3.75	3.78	3.83
Gross market revenue/a.	292.37	225.69	234.98	229.03	236.62	234.71	238.66	243.48	245.97	248.54	252.46
Marketing loan benefits/a.	0.00	0.00	0.00	0.01	0.00	0.03	0.00	0.00	0.01	0.00	0.00
Variable expenses/a.	128.81	136.75	137.40	138.30	139.94	141.23	142.13	144.41	147.21	150.07	152.93
CCP revenue/base a.	0.00	0.01	0.00	0.02	0.00	0.06	0.00	0.00	0.01	0.00	0.01
Direct payment/base a.	16.84	16.84	16.84	16.84	16.84	16.84	16.84	16.84	16.84	16.84	16.84

Barley supply and utilization

June-May year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(M	illion acres)				
Planted area	4.02	4.16	4.35	4.29	4.15	4.13	4.03	3.98	3.94	3.88	3.80
Harvested area	3.51	3.61	3.78	3.74	3.61	3.59	3.51	3.47	3.43	3.38	3.31
					(Busl	nels per ac	re)				
Yield	60.4	62.7	63.5	64.2	64.8	65.4	65.9	66.5	67.3	67.8	68.5
Supply and use					(Mill	ion bushel	s)				
Production	212	227	241	241	235	235	232	231	231	229	227
Imports	20	13	11	11	11	10	10	10	10	10	10
Domestic use	201	200	207	207	203	201	199	197	197	195	193
Exports	50	39	42	43	43	43	43	43	43	43	43
Ending stocks	49	49	52	54	54	55	55	56	56	57	57
Prices and returns						(Dollars)					
All barley farm price/bu.	4.15	4.10	4.01	3.89	3.95	3.87	3.92	3.94	3.92	3.90	3.93
Feed barley price/bu.	4.17	3.51	3.48	3.40	3.46	3.41	3.45	3.47	3.46	3.46	3.47
Gross market revenue/a.	250.55	255.59	253.68	248.09	254.82	252.12	256.51	260.41	262.15	263.13	267.07
Marketing loan benefits/a.	0.00	0.00	0.02	0.01	0.02	0.01	0.00	0.02	0.01	0.00	0.02
Variable expenses/a.	111.20	116.91	117.73	118.89	120.04	120.89	121.43	122.96	124.84	126.74	128.63
CCP revenue/base a.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Direct payment/base a.	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71

Oats and Hay

- Oats prices have increased in 2007/08 along with prices for other grains, increasing the per-acre value of oats production.
- •The most recent USDA estimates show oats production costs at a much higher level than reported previously.

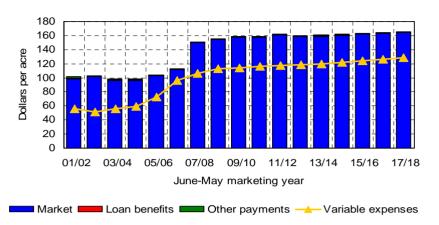
National average hay yields were higher in 2007 than in 2006, but were below the long-term trend for the third straight year.

- •If production does increase in 2008, it should allow some further modest rebuilding of hay stocks.
- •Hay area remains fairly stable, so the projected increase in production is a result of slow growth in yields per acre.

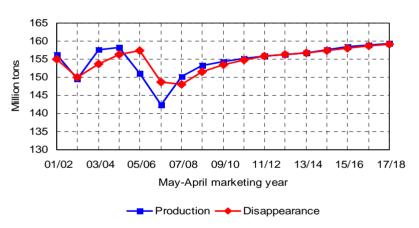
•Hay prices rose for the fourth straight year in 2007/08 because of continued tight supplies.

- Hay prices are expected to remain high by historical standards even if yields return to average levels.
- Hay markets are more fragmented than markets for most other agricultural commodities, so trends in national average prices may not reflect local conditions.

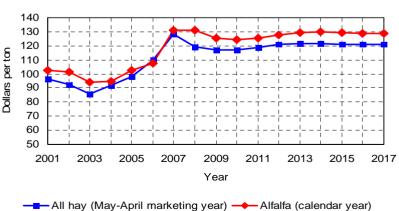
Higher oats prices increase producer receipts



Hay production recovers



Hay prices rose again in 2007/08



Oats supply and utilization

June-May year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	
Area					(Mi	illion acres)					
Planted area	3.76	3.25	3.43	3.51	3.50	3.47	3.41	3.35	3.31	3.27	3.24	
Harvested area	1.51	1.31	1.37	1.40	1.40	1.38	1.35	1.32	1.30	1.28	1.27	
	(Bushels per acre)											
Yield	60.9	61.8	62.1	62.7	63.0	63.2	63.5	63.9	64.2	64.6	64.9	
Supply and use	(Million bushels)											
Production	92	81	85	88	88	88	86	84	84	83	82	
Imports	110	113	113	112	111	110	110	110	110	109	109	
Domestic use	206	197	197	197	198	196	195	193	192	191	190	
Exports	2	2	2	2	2	2	2	2	2	2	2	
Ending stocks	44	39	38	38	38	38	37	37	36	36	35	
Prices and returns						(Dollars)						
Farm price/bu.	2.46	2.50	2.54	2.52	2.55	2.51	2.52	2.52	2.53	2.53	2.54	
Gross market revenue/a.	149.93	154.06	157.19	157.42	160.49	158.33	159.30	160.42	161.97	162.89	164.54	
Marketing loan benefits/a.	0.00	0.57	0.34	0.57	0.38	0.53	0.64	0.64	0.54	0.44	0.31	
Variable expenses/a.	106.35	113.02	114.41	116.08	117.64	118.84	119.69	121.63	123.98	126.39	128.83	
CCP revenue/base a.	0.00	0.10	0.07	0.09	0.06	0.09	0.11	0.09	0.09	0.07	0.05	
Direct payment/base a.	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	

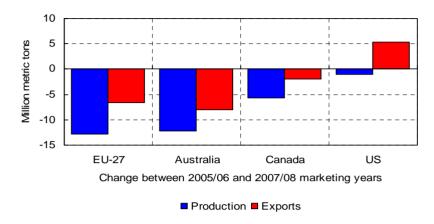
Hay supply and utilization

May-April year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
					(Mi	Illion acres	s)				
Harvested area	61.6	61.7	61.3	61.2	61.1	61.1	61.1	61.1	61.1	61.0	60.9
					(To	ns per acre	e)				
Yield	2.44	2.48	2.52	2.54	2.55	2.56	2.57	2.58	2.60	2.61	2.62
Supply and use					(M	lillion tons))				
Production	150.3	153.3	154.4	155.2	155.9	156.2	156.8	157.7	158.4	159.0	159.3
Disappearance	148.0	151.5	153.5	154.8	155.8	156.3	156.7	157.3	158.1	158.6	159.1
Ending stocks	17.4	19.2	20.0	20.4	20.5	20.4	20.5	20.9	21.2	21.6	21.9
Prices					(Dol	lars per to	n)				
All hay (crop year)	128.32	119.09	117.25	117.21	118.85	120.80	121.62	121.59	121.13	120.93	120.88
Alfalfa (calendar year)	131.18	131.20	125.38	124.46	125.64	127.85	129.39	129.77	129.42	129.05	128.92

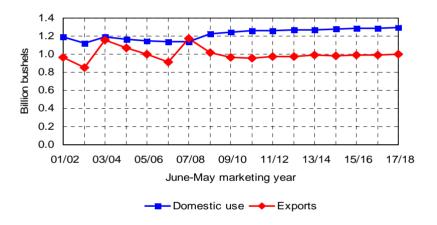
Wheat

- •Wheat yields were below normal in 2007/08 in the European Union (EU), Australia and Canada.
- •According to February 2008 USDA estimates, total wheat exports by those three countries are 16.7 million metric tons lower in 2007/08 than two years ago.
- •Reduced supplies from competing exporters has resulted in high US wheat exports and prices in 2007/08.
- •If foreign wheat yields return to normal levels and producers around the world respond to high wheat prices, US wheat exports could decline in 2008/09.
- •Global grain demand is strong, so projected exports remain near 1.0 billion bushels in spite of wheat prices in excess of \$5.00 per bushel.
- •Domestic wheat use increases slightly over the next ten years, as population growth results in more wheat food use.
- The sharp increase in wheat prices dramatically increases producer returns over variable expenses in 2007/08.
- Projected prices and returns decline in 2008/09, but remain well above pre-2007 levels.
- •Wheat net returns remain strong throughout the baseline, but even greater returns to corn and soybean production means the long-term decline in wheat acreage is likely to resume in 2009.

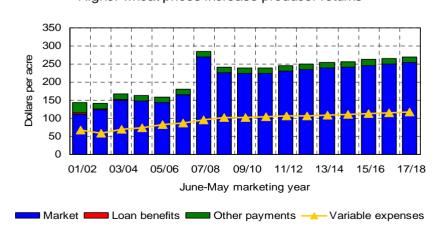
Poor foreign crops limit competing wheat supplies



Wheat exports decline as foreign supplies recover



Higher wheat prices increase producer returns



Wheat supply and utilization

June-May year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(Mi	illion acres)				
Base area	74.7	74.8	75.0	75.0	75.0	75.0	75.0	75.0	75.1	75.1	75.1
Planted area	60.4	61.7	57.8	57.6	57.4	57.3	57.1	57.1	56.8	56.6	56.5
Harvested area	51.0	52.5	48.9	48.8	48.6	48.5	48.3	48.3	48.0	47.8	47.7
Yield					(Busl	hels per ac	cre)				
Actual	40.5	42.7	42.8	43.2	43.5	43.8	44.2	44.5	44.8	45.2	45.5
Program, direct	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5
Program, CCP	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1	36.1
					(Mill	lion bushe	s)				
Supply	2,613	2,651	2,613	2,617	2,629	2,627	2,631	2,637	2,636	2,633	2,640
Beginning stocks	456	295	406	400	402	391	385	376	371	362	356
Production	2,067	2,246	2,100	2,109	2,118	2,127	2,137	2,151	2,154	2,160	2,173
Imports	90	109	108	108	109	109	109	109	110	110	110
Domestic use	1,143	1,226	1,247	1,257	1,261	1,266	1,269	1,279	1,283	1,288	1,293
Feed, residual	115	191	203	202	200	196	191	193	189	186	183
Seed	84	79	79	79	79	79	79	79	79	79	79
Food, other	944	956	966	976	982	991	999	1,007	1,015	1,022	1,030
Exports	1,175	1,019	966	958	976	977	987	986	990	988	996
Total use	2,318	2,245	2,213	2,215	2,238	2,243	2,255	2,265	2,273	2,276	2,289
Ending stocks	295	406	400	402	391	385	376	371	362	356	352
CCC inventory	35	35	35	35	35	35	35	35	35	35	35
Under loan	5	13	13	13	13	12	12	12	11	11	11
Other stocks	255	357	352	354	344	337	329	325	316	310	306
Prices and returns						(Dollars)					
Farm price/bu.	6.68	5.29	5.23	5.21	5.31	5.35	5.42	5.46	5.51	5.56	5.61
Loan rate/bu.	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75
Avg. LDP or MLG rate/bu.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Target price/bu.	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
CCP rate/bu.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Direct payment/bu.	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Gross market revenue/a.	270.59	225.16	223.62	224.55	230.51	234.02	238.83	242.09	246.73	250.52	254.91
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
Variable expenses/a.	95.99	101.50	102.76	104.45	106.11	107.50	108.60	110.68	113.12	115.60	118.11
Market + MLB net returns/a.	174.60	123.66	120.86	120.10	124.40	126.52	130.23	131.41	133.62	134.92	136.80
CCP revenue/base a.	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Direct payment/base a.	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25

Rice

•US rice exports have increased in 2007/08, resulting in lower stocks and higher prices.

- Limited supplies may reduce rice exports in 2008/09 and 2009/10, but strong global rice demand leads to projected export increases in later years.
- Domestic rice use increases over the next ten years, primarily because of population growth.

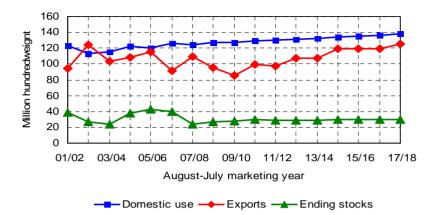
•The season average farm price of rice is expected to increase for the third straight year in 2007/08.

- •World and domestic rice prices are projected to decline slightly in 2008/09.
- •Average adjusted world prices (AWP) far exceed the loan rate, suggesting marketing loan benefits are likely to be available only rarely.

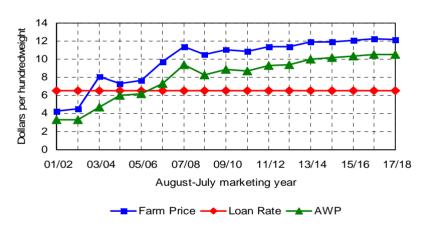
Until 2006/07, changes in rice prices had offsetting impacts on government payments.

- •Rice prices have risen to levels where fixed direct payments are the only payments available. Therefore, payments do not decline when prices rise.
- •The increase in rice production costs and lower government payments mean producer net returns have risen much less than market prices.

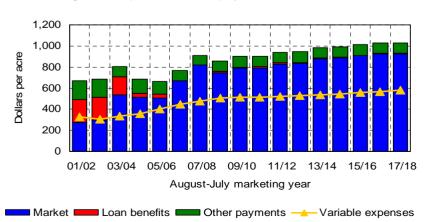
Higher rice exports in 2007/08 reduce stocks



Rice prices remain well above loan rates



Higher rice prices reduce payments, raise returns



Rice supply and utilization

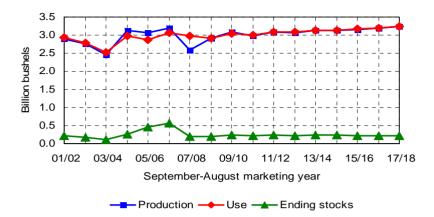
Area Base area											
Base area					(Mi	Ilion acres	.)				
	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48
Planted area	2.76	2.90	2.69	2.88	2.82	2.95	2.93	3.10	3.07	3.06	3.13
Harvested area	2.75	2.89	2.68	2.87	2.81	2.94	2.92	3.08	3.05	3.05	3.11
Yield					(Pou	nds per ac	re)				
Actual	7,185	7,072	7,162	7,216	7,281	7,331	7,395	7,450	7,509	7,573	7,635
Program, direct	4,820	4,820	4,820	4,820	4,820	4,820	4,820	4,820	4,820	4,820	4,820
Program, CCP	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128
					(Million	hundredw	eight)				
Supply	258.1	250.1	241.2	258.1	256.9	267.9	268.8	282.7	283.7	285.5	293.0
Beginning stocks	39.3	24.0	27.0	28.3	29.5	29.0	29.1	29.0	29.8	29.7	29.7
Production	197.5	204.1	191.9	207.1	204.4	215.5	215.9	229.5	229.3	230.8	237.8
Imports	21.4	21.9	22.2	22.7	23.0	23.4	23.8	24.2	24.6	25.0	25.5
Domestic use	124.3	127.1	127.7	129.4	130.1	131.6	132.2	133.7	134.9	136.2	137.8
Exports	109.8	95.9	85.2	99.2	97.8	107.3	107.6	119.2	119.2	119.6	125.0
Total use	234.1	223.0	212.9	228.6	227.9	238.8	239.8	252.9	254.1	255.8	262.8
Ending stocks	24.0	27.0	28.3	29.5	29.0	29.1	29.0	29.8	29.7	29.7	30.3
CCC inventory	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other stocks	24.0	27.0	28.3	29.5	29.0	29.1	29.0	29.8	29.7	29.7	30.3
Prices and returns						(Dollars)					
Farm price/cwt	11.36	10.53	11.02	10.91	11.41	11.41	11.90	11.92	12.08	12.25	12.14
Adjusted world price/cwt	9.35	8.29	8.86	8.68	9.28	9.36	10.00	10.14	10.34	10.49	10.51
Loan rate/cwt	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Avg. LDP or MLG rate/cwt	0.00	0.22	0.16	0.23	0.14	0.13	0.10	0.08	0.07	0.08	0.05
Target price/cwt	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
CCP rate/cwt	0.00	0.07	0.06	0.10	0.05	0.06	0.04	0.04	0.05	0.04	0.04
Direct payment/cwt	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
Gross market revenue/a.	816.49	744.07	789.38	786.45	830.50	835.85	879.81	887.32	907.03	927.53	926.44
Marketing loan benefits/a.	0.00	15.25	11.45	16.76	9.88	9.57	7.37	5.76	5.18	6.07	4.11
Variable expenses/a.	480.51	508.98	512.91	516.81	524.74	530.55	535.21	544.58	555.74	566.94	578.28
Market + MLB net returns/a.	335.98	250.33	287.92	286.39	315.64	314.87	351.97	348.50	356.47	366.65	352.27
CCP revenue/base a.	0.00	3.13	2.69	4.28	2.21	2.59	1.74	1.84	2.14	1.81	1.71
Direct payment/base a.	96.27	96.27	96.27	96.27	96.27	96.27	96.27	96.27	96.27	96.27	96.27

Soybeans

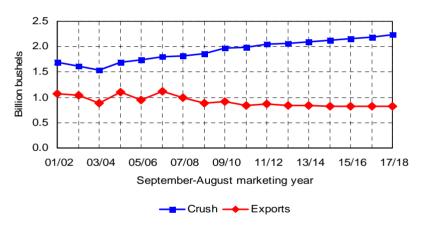
- Acreage shifts from soybeans to corn caused a large reduction in 2007 soybean production.
- •With little change in 2007/08 soybean use, stocks have declined sharply and prices increased.
- Soybean production is projected to increase in 2008. Supply and use are in closer balance, but stocks remain low and prices high, by historical standards.
- In response to strong domestic and global demand for vegetable oil and protein meal, soybean crush expands steadily over the next ten years.
- Projected soybean prices are high enough to encourage increased production in South America, reducing future US soybean exports.

- Higher soybean prices dramatically increased producer returns over variable expenses in 2007/08.
- •The large increase in soybean prices and net returns makes soybeans more competitive with corn and other crops.
- This contributes to the projected increase in soybean acreage in 2008.

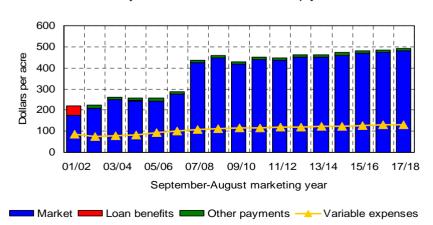
Soybean markets respond to lower 2007 production



Soybean crush expands, exports contract



Soybean returns increase sharply



Soybean supply and utilization

September-August year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(M	illion acres	s)				
Base area	52.0	52.0	52.1	52.2	52.2	52.2	52.2	52.2	52.2	52.2	52.2
Planted area	63.6	69.5	73.1	69.7	71.6	70.1	70.8	70.3	70.3	70.3	70.6
Harvested area	62.8	68.5	72.0	68.8	70.6	69.1	69.9	69.3	69.3	69.4	69.7
Yield					(Bus	hels per a	cre)				
Actual	41.2	42.5	42.9	43.4	43.8	44.3	44.7	45.1	45.6	46.0	46.5
Program, direct	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8
Program, CCP	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1
					(Mil	lion bushe	ls)				
Supply	3,165	3,114	3,292	3,227	3,320	3,300	3,352	3,367	3,395	3,424	3,469
Beginning stocks	574	195	198	239	221	233	222	232	231	225	225
Production	2,585	2,913	3,088	2,982	3,094	3,061	3,124	3,129	3,158	3,193	3,238
Imports	6	6	6	6	6	6	6	6	6	6	6
Domestic use	1,976	2,039	2,143	2,169	2,222	2,245	2,282	2,310	2,344	2,382	2,422
Crush	1,816	1,871	1,969	1,995	2,044	2,066	2,100	2,126	2,158	2,192	2,229
Seed, residual	160	168	173	174	177	179	182	184	186	190	193
Exports	995	878	910	837	866	833	838	826	826	817	820
Total use	2,970	2,917	3,053	3,006	3,087	3,078	3,120	3,137	3,170	3,199	3,241
Ending stocks	195	198	239	221	233	222	232	231	225	225	228
CCC inventory	0	0	0	0	0	0	0	0	0	0	0
Under loan	9	17	31	28	28	23	29	29	21	24	23
Other stocks	186	181	208	193	205	199	203	202	204	201	204
Prices and returns						(Dollars)					
Farm price/bu.	10.32	10.58	9.80	10.17	10.04	10.23	10.14	10.26	10.36	10.34	10.38
IL processor price/bu.	10.64	10.89	10.14	10.50	10.37	10.55	10.47	10.58	10.69	10.67	10.70
Loan rate/bu.	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Avg. LDP or MLG rate/bu.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Target price/bu.	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80	5.80
CCP rate/bu.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Direct payment/bu.	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Gross market revenue/a.	424.57	447.14	417.44	438.33	436.93	450.60	450.03	460.01	469.61	473.73	479.32
Marketing loan benefits/a.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00
Variable expenses/a.	107.83	113.30	114.80	116.35	118.26	119.93	121.32	123.62	126.23	128.87	131.49
Market + MLB net returns/a.	316.73	333.85	302.64	321.99	318.67	330.68	328.71	336.50	343.38	344.86	347.83
CCP revenue/base a.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00
Direct payment/base a.	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52
Soybean/corn price ratio	2.59	2.71	2.50	2.64	2.55	2.63	2.59	2.59	2.61	2.61	2.61
48% meal price/ton	293.35	275.98	246.40	237.87	229.88	229.63	224.93	223.24	221.34	216.00	211.84
Oil price/cwt.	44.95	47.70	48.98	53.13	54.74	55.84	56.29	57.46	59.00	60.36	61.88
Crushing margin/bu.	1.48	1.12	1.32	1.23	1.35	1.29	1.31	1.29	1.32	1.37	1.41

Soybean products

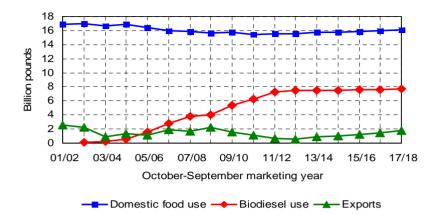
Rising use of soybean oil to produce biodiesel has resulted in higher soybean oil prices.

- ■These higher prices have slowed other domestic soybean oil consumption and reduced US soybean oil exports.
- Once projected growth in US biodiesel production slows, strong global demand for vegetable oil results in renewed growth in US soybean oil exports.
- •Soybean meal domestic use increases throughout the baseline in response to growth in poultry and livestock production and declining soybean meal prices.
- •US soybean meal exports increase in response to lower prices and strong foreign demand for protein.

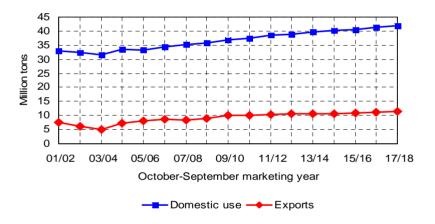
•Increased biofuel production affects relative soybean meal and oil prices. Oil prices are strengthened by production of biodiesel. Meal prices are weakened by the resulting increase in crush.

- •Meal has accounted for most of the value in a bushel of soybeans. The oil share increases and is projected to exceed the meal share by 2010/11.
- Projected crushing margins are relatively stable.

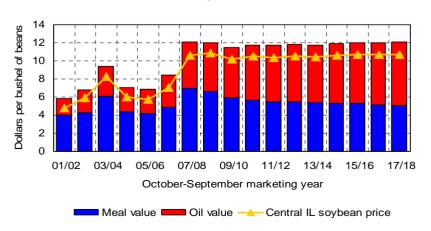
Biodiesel increases soybean oil demand



Soybean meal use grows with global protein demand



Oil accounts for rising share of crush value



Soybean oil supply and utilization

October-September year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	
					(Mil	lion pound	s)					
Supply	23,661	23,657	24,228	24,338	24,784	24,968	25,318	25,569	25,889	26,234	26,612	
Beginning stocks	2,904	2,269	1,718	1,538	1,416	1,353	1,320	1,265	1,230	1,181	1,139	
Production	20,719	21,351	22,473	22,762	23,330	23,577	23,960	24,266	24,622	25,015	25,436	
Imports	38	38	38	38	38	38	38	38	38	38	38	
Domestic use	19,762	19,691	21,122	21,753	22,733	23,065	23,193	23,328	23,480	23,641	23,772	
Biodiesel	3,841	3,999	5,397	6,287	7,218	7,478	7,475	7,519	7,578	7,656	7,703	
Food and other	15,921	15,692	15,725	15,465	15,515	15,587	15,718	15,809	15,902	15,985	16,069	
Exports	1,630	2,248	1,568	1,169	698	582	859	1,011	1,227	1,453	1,748	
Total use	21,392	21,939	22,690	22,922	23,431	23,647	24,053	24,339	24,708	25,094	25,520	
Ending stocks	2,269	1,718	1,538	1,416	1,353	1,320	1,265	1,230	1,181	1,139	1,093	
Price	(Cents per pound)											
Decatur	44.95	47.70	48.98	53.13	54.74	55.84	56.29	57.46	59.00	60.36	61.88	

Soybean meal supply and utilization

October-September year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
					(Tho	ousand ton	ıs)				
Supply	43,768	45,042	47,399	48,021	49,214	49,735	50,535	51,176	51,920	52,744	53,626
Beginning stocks	351	306	320	339	346	351	352	354	356	358	362
Production	43,252	44,571	46,914	47,517	48,703	49,219	50,019	50,657	51,399	52,221	53,098
Imports	165	165	165	165	165	165	165	165	165	165	165
Domestic use	35,117	35,898	37,023	37,559	38,517	38,898	39,609	40,111	40,572	41,236	41,811
Exports	8,345	8,824	10,038	10,116	10,346	10,486	10,572	10,709	10,990	11,146	11,449
Total use	43,462	44,722	47,061	47,675	48,863	49,384	50,181	50,820	51,562	52,382	53,260
Ending stocks	306	320	339	346	351	352	354	356	358	362	366
Price					(Do	llars per to	n)				
Decatur, 48% protein	293.35	275.98	246.40	237.87	229.88	229.63	224.93	223.24	221.34	216.00	211.84

Biodiesel

Biodiesel production and production capacity are expanding rapidly.

- •In spite of rising soybean oil prices. biodiesel production increases to meet the EISA use mandate and to satisfy demand from Europe.
- These projections assume authority to waive the EISA biodiesel mandate is not utilized.

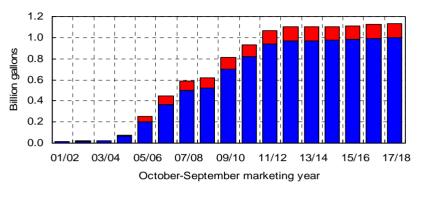
Biodiesel has typically sold at a premium compared to regular #2 diesel at the wholesale level. This is in part because of a \$1.00 per gallon tax credit.

- To satisfy the EISA biodiesel mandate. producers must be paid enough to generate the required supplies, even as vegetable oil prices rise.
- Part of the cost of rising biodiesel prices would be passed along to final consumers of diesel fuel.

Rising vegetable oil prices mean average biodiesel plant returns over operating costs may be narrow, or even negative, in 2007/08.

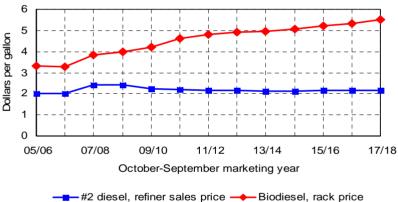
Over the next ten years, projected returns are just enough to generate the required levels of supply, but leave much capacity underutilized.

Biodiesel production grows to meet mandate



■ From soybean oil ■ From other fats and oils

Biodiesel prices increase relative to diesel fuel



Biodiesel returns over costs are narrow



Biodiesel supply and utilization

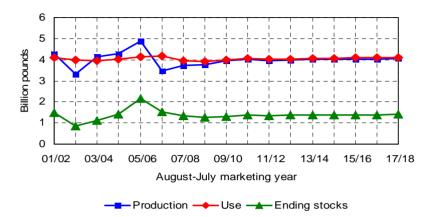
October-September year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Biodiesel supply and use					(Mill	ion gallons	s)				
Production	592	618	809	933	1,065	1,101	1,100	1,106	1,114	1,124	1,131
From soybean oil	499	519	701	817	937	971	971	977	984	994	1,000
From other fats and oils	93	99	109	117	128	130	129	129	130	130	131
Net exports	188	222	227	188	132	102	100	106	114	124	132
Domestic disappearance	404	396	582	745	933	999	1,000	1,000	1,000	1,000	1,000
Fuel prices					(Dolla	rs per galle	on)				
Biodiesel, rack	3.84	3.99	4.22	4.61	4.81	4.92	4.96	5.06	5.20	5.33	5.50
#2 Diesel, refiner sales	2.44	2.42	2.25	2.20	2.18	2.15	2.14	2.14	2.15	2.15	2.15
#2 Diesel, retail	2.88	3.23	3.09	2.93	2.93	2.92	2.90	2.90	2.91	2.91	2.92
Tax credit by feedstock											
Pre-consumer oils, fats	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Post-consumer oils, fats	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Costs and returns											
Biodiesel value	3.84	3.99	4.22	4.61	4.81	4.92	4.96	5.06	5.20	5.33	5.50
Glycerin value	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Soybean oil cost	-3.46	-3.67	-3.77	-4.09	-4.21	-4.30	-4.33	-4.42	-4.54	-4.65	-4.76
Other operating costs	-0.54	-0.55	-0.55	-0.56	-0.56	-0.57	-0.57	-0.58	-0.58	-0.59	-0.60
Net operating return	-0.11	-0.18	-0.06	0.01	0.08	0.11	0.11	0.11	0.12	0.15	0.19

Peanuts

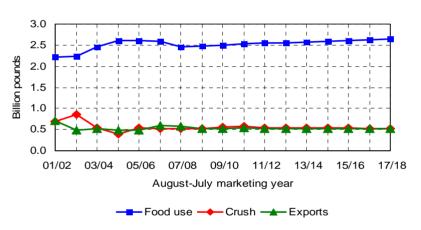
- Reduced peanut acreage in 2006 and 2007 resulted in production levels low enough to allow stock levels to decline.
- •These lower stocks have contributed to an increase in peanut prices in 2007/08.
- Peanut production and consumption stabilize near four billion pounds.

- •Domestic food use of peanuts increased significantly after policy reforms were enacted in the 2002 farm bill, but has declined in 2006/07 and 2007/08.
- •A modest projected increase in peanut food use can be attributed to population growth, as per capita consumption is flat or declining.
- •Peanut crush and exports vary from year to year, but little growth is expected in either category.
- •The projected peanut price increase in 2007/08 significantly increases the peracre value of peanut production.
- •The increase in market prices results in lower CCPs to producers with peanut base acreage.
- Increases in variable production expenses also offset part of the increase in peanut prices.

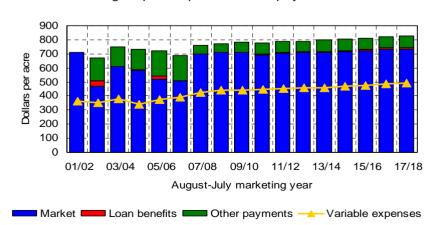
Reduced peanut production allows stocks to decline



Peanut use by category remains stable



Higher peanut prices reduce payments



Peanut supply and utilization

August-July year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(Mi	Ilion acres	s)				
Base area	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51	1.51
Planted area	1.23	1.28	1.32	1.34	1.30	1.30	1.30	1.29	1.28	1.27	1.27
Harvested area	1.20	1.25	1.29	1.31	1.27	1.27	1.27	1.26	1.25	1.24	1.24
Yield					(Pou	nds per ac	cre)				
Actual	3,130	3,034	3,062	3,090	3,114	3,142	3,169	3,199	3,221	3,251	3,277
Program	2,992	2,992	2,992	2,992	2,992	2,992	2,992	2,992	2,992	2,992	2,992
					(Mil	ion pound	s)				
Supply	5,316	5,187	5,291	5,408	5,383	5,408	5,431	5,462	5,482	5,486	5,520
Beginning stocks	1,520	1,350	1,281	1,315	1,363	1,358	1,367	1,374	1,387	1,395	1,397
Production	3,741	3,782	3,955	4,038	3,965	3,996	4,009	4,033	4,039	4,036	4,068
Imports	55	55	55	55	55	55	55	55	55	55	55
Domestic use	3,391	3,382	3,453	3,512	3,499	3,517	3,531	3,544	3,560	3,569	3,590
Food	2,468	2,474	2,496	2,530	2,544	2,560	2,579	2,597	2,615	2,633	2,653
Crush	530	518	559	575	547	548	543	538	535	525	523
Seed, feed & residual	393	390	398	407	408	409	408	408	410	412	415
Exports	575	524	522	533	526	525	526	531	526	520	518
Total use	3,966	3,906	3,975	4,045	4,025	4,042	4,057	4,075	4,087	4,089	4,109
Ending stocks	1,350	1,281	1,315	1,363	1,358	1,367	1,374	1,387	1,395	1,397	1,412
Prices and returns						(Dollars)					
Farm price/lb.	0.224	0.236	0.234	0.226	0.228	0.227	0.226	0.226	0.226	0.227	0.226
Loan rate/lb.	0.178	0.178	0.178	0.178	0.178	0.178	0.178	0.178	0.178	0.178	0.178
Avg. LDP or MLG rate/lb.	0.000	0.000	0.000	0.002	0.002	0.001	0.002	0.002	0.003	0.003	0.003
Target price/lb.	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248
CCP rate/lb.	0.005	0.006	0.009	0.013	0.012	0.012	0.014	0.014	0.014	0.013	0.015
Direct payment/lb.	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018
Gross market revenue/a.	701.18	710.03	710.69	693.79	702.88	708.58	711.85	715.81	721.28	732.07	734.22
Marketing loan benefits/a.	0.00	0.57	1.65	5.82	6.55	4.41	5.32	8.04	9.13	9.84	9.16
Variable expenses/a.	423.14	440.31	443.06	446.54	451.54	456.08	459.91	467.32	476.04	484.94	493.84
Market + MLB net returns/a.	278.03	270.30	269.28	253.08	257.89	256.91	257.26	256.53	254.37	256.97	249.53
CCP revenue/base a.	13.99	15.83	21.90	32.48	31.70	31.13	34.47	35.76	36.40	33.95	37.52
Direct payment/base a.	45.78	45.78	45.78	45.78	45.78	45.78	45.78	45.78	45.78	45.78	45.78

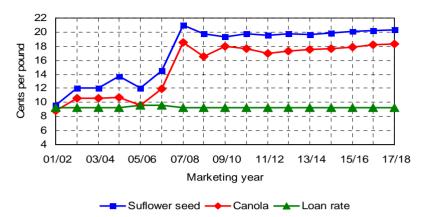
Other oilseeds

- Sunflower seed and canola prices increase sharply in 2007/08 in response to strong global demand for vegetable oil.
- •Growth in US and European biodiesel production, strong food demand in China and India, and a variety of other factors keep minor oilseed prices high over the next ten years.

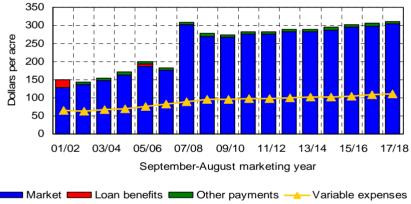
- •Sunflower seed returns per acre increased sharply in 2007/08 because of higher prices and yields.
- •Sunflower seed returns remain well above recent average levels over the next ten years.
- As with many other crops, direct payments are the only support provided at projected average price levels.

- •Higher prices for all oilseeds and reduced cottonseed production contribute to an increase in cottonseed prices in 2007/08.
- •Further increases are possible in 2008/09, with reduced cottonseed production a contributing factor.
- Strength in vegetable oil markets continues to support cottonseed prices over the next ten years.

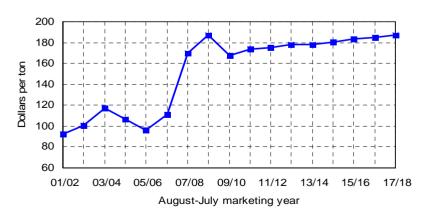
Other oilseed prices increase sharply in 2007/08



Higher sunflower seed prices increase returns



Cottonseed prices have also increased greatly



Sunflower seed supply and utilization

September-August year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(Mi	illion acres	s)				
Planted area	2.07	2.18	2.18	2.20	2.21	2.19	2.21	2.20	2.20	2.22	2.23
Harvested area	2.01	2.02	2.03	2.04	2.06	2.03	2.05	2.04	2.04	2.06	2.07
					(Pou	nds per ac	re)				
Yield	1,437	1,376	1,391	1,401	1,419	1,431	1,447	1,459	1,474	1,488	1,505
Supply and use					(Mil	lion pound	s)				
Production	2,889	2,790	2,823	2,860	2,926	2,915	2,976	2,988	3,019	3,067	3,115
Imports	185	185	190	195	200	205	210	215	220	225	230
Domestic use	2,767	2,726	2,740	2,760	2,827	2,855	2,927	2,966	3,015	3,080	3,149
Exports	366	246	264	289	288	271	256	237	222	208	190
Ending stocks	242	245	254	260	271	266	269	270	272	276	283
Prices and returns						(Dollars)					
Farm price/lb.	0.210	0.197	0.193	0.198	0.196	0.198	0.197	0.198	0.201	0.202	0.203
Gross market revenue/a.	301.96	270.41	266.90	275.65	275.89	281.62	282.36	287.74	295.15	298.61	303.36
Marketing loan benefits/a.	0.00	0.02	0.04	0.00	0.14	0.13	0.21	0.17	0.15	0.11	0.00
Variable expenses/a.	90.05	94.61	95.87	97.16	98.76	100.15	101.32	103.23	105.42	107.62	109.81
CCP revenue/base a.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Direct payment/base a.	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38	7.38

Other oilseeds

			(1	Γhousand t	tons, Aug	Jul. year)				
6,596	5,315	6,493	6,443	6,431	6,338	6,333	6,240	6,198	6,209	6,178
			(Million pou	ınds, JulJ	un. year)				
1,454	1,933	1,872	2,125	2,150	2,110	2,197	2,252	2,321	2,388	2,481
			1)	Dollars per	ton, Aug	Jul. year)				
169.64	187.50	167.89	173.69	174.91	178.05	177.85	180.78	183.61	184.93	186.87
			(C	ents per p	ound, Jul	Jun. year)				
18.50	16.54	17.92	17.66	17.01	17.33	17.49	17.69	17.87	18.20	18.30
	1,454 169.64	1,454 1,933 169.64 187.50	1,454 1,933 1,872 169.64 187.50 167.89	(I 1,454 1,933 1,872 2,125 (I 169.64 187.50 167.89 173.69 (C	(Million pou 1,454 1,933 1,872 2,125 2,150 (Dollars per 169.64 187.50 167.89 173.69 174.91 (Cents per p	(Million pounds, JulJ 1,454 1,933 1,872 2,125 2,150 2,110 (Dollars per ton, Aug 169.64 187.50 167.89 173.69 174.91 178.05 (Cents per pound, Jul	(Million pounds, JulJun. year) 1,454 1,933 1,872 2,125 2,150 2,110 2,197 (Dollars per ton, AugJul. year) 169.64 187.50 167.89 173.69 174.91 178.05 177.85 (Cents per pound, JulJun. year)	(Million pounds, JulJun. year) 1,454 1,933 1,872 2,125 2,150 2,110 2,197 2,252 (Dollars per ton, AugJul. year) 169.64 187.50 167.89 173.69 174.91 178.05 177.85 180.78 (Cents per pound, JulJun. year)	(Million pounds, JulJun. year) 1,454 1,933 1,872 2,125 2,150 2,110 2,197 2,252 2,321 (Dollars per ton, AugJul. year) 169.64 187.50 167.89 173.69 174.91 178.05 177.85 180.78 183.61 (Cents per pound, JulJun. year)	(Million pounds, JulJun. year) 1,454 1,933 1,872 2,125 2,150 2,110 2,197 2,252 2,321 2,388 (Dollars per ton, AugJul. year) 169.64 187.50 167.89 173.69 174.91 178.05 177.85 180.78 183.61 184.93 (Cents per pound, JulJun. year)

Upland cotton

•Upland cotton production declined in 2007, as a large reduction in acreage more than offset the effects of record vields.

- •A further decline in cotton area and production is expected for 2008.
- Stocks exceeded nine million bales at the end of the 2006/07 marketing year. Reduced production allows stocks to return to more normal levels in 2008/09.

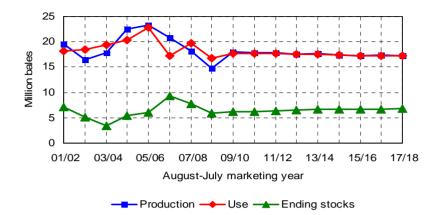
•US upland cotton exports far exceed domestic mill use.

- •Changes in Chinese cotton purchasing patterns have contributed to large annual swings in US cotton exports.
- •Average projected exports are flat after 2009/10, but significant annual variation can be expected.
- Projected mill use continues to decline.

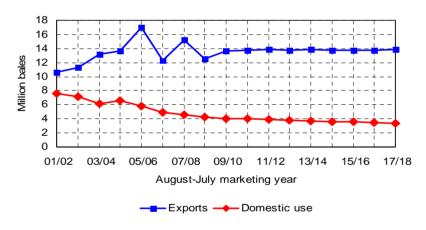
•Higher cotton prices and yields increase market receipts per acre in 2007/08.

- •The increase in market receipts is partially offset by reduced marketing loan benefits and higher production costs.
- Producers with base acreage also receive reduced CCPs when prices rise.

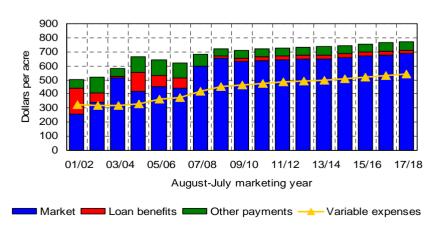
Cotton production and stocks decline in 2008/09



Exports dominate cotton use



Higher cotton receipts offset by lower payments



Upland cotton supply and utilization

August-July year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(Mi	illion acres	s)				
Base area	18.37	18.39	18.41	18.43	18.43	18.43	18.43	18.43	18.43	18.43	18.43
Planted area	10.54	9.33	11.32	11.16	11.05	10.80	10.71	10.49	10.35	10.29	10.17
Harvested area	10.20	8.49	10.27	10.11	10.02	9.80	9.71	9.50	9.37	9.31	9.19
Yield					(Pou	nds per ac	re)				
Actual	857	830	840	847	854	862	870	877	884	892	900
Program, direct	599	599	599	599	599	599	599	599	599	599	599
Program, CCP	634	634	634	634	634	634	634	634	634	634	634
					(M	illion bales)				
Supply	27.59	22.55	23.84	24.05	24.15	24.05	24.13	24.00	23.91	23.98	24.00
Beginning stocks	9.37	7.84	5.85	6.17	6.28	6.42	6.49	6.61	6.61	6.63	6.72
Production	18.21	14.70	17.99	17.87	17.85	17.62	17.63	17.39	17.29	17.34	17.27
Imports	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Domestic use											
Mill use	4.57	4.23	4.08	3.99	3.89	3.76	3.66	3.60	3.55	3.46	3.40
Exports	15.18	12.47	13.59	13.78	13.84	13.80	13.86	13.79	13.73	13.80	13.82
Total use	19.75	16.70	17.67	17.77	17.72	17.56	17.52	17.39	17.28	17.26	17.22
Unaccounted	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ending stocks	7.84	5.85	6.17	6.28	6.42	6.49	6.61	6.61	6.63	6.72	6.78
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	7.84	5.85	6.17	6.28	6.42	6.49	6.61	6.61	6.63	6.72	6.78
Prices and returns						(Dollars)					
Farm price/lb.	0.573	0.648	0.627	0.625	0.622	0.617	0.615	0.620	0.624	0.624	0.624
Cotlook A Index/lb.	0.734	0.785	0.767	0.765	0.762	0.751	0.747	0.750	0.756	0.755	0.754
Adjusted world price/lb.	0.574	0.625	0.607	0.605	0.602	0.591	0.587	0.590	0.596	0.595	0.594
Loan rate/lb.	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520
Avg. LDP or MLG rate/lb.	0.000	0.022	0.027	0.031	0.031	0.033	0.030	0.027	0.029	0.031	0.029
Target price/lb.	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724	0.724
CCP rate/lb.	0.084	0.032	0.042	0.044	0.044	0.049	0.049	0.048	0.046	0.043	0.044
Direct payment/lb.	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067
Gross market revenue/a.	600.74	654.37	632.16	639.03	642.00	646.06	649.57	660.88	672.23	678.32	685.44
Marketing loan benefits/a.	0.00	18.12	22.32	26.48	27.08	28.38	26.56	24.18	25.51	28.03	26.10
Variable expenses/a.	420.81	451.61	465.35	477.52	486.35	493.57	498.82	508.37	519.45	530.92	542.29
Market + MLB net returns/a.	179.93	220.88	189.14	187.98	182.72	180.87	177.32	176.69	178.28	175.43	169.25
CCP revenue/base a.	45.24	17.07	22.61	23.89	23.69	26.19	26.49	25.97	24.76	23.08	23.98
Direct payment/base a.	33.96	33.96	33.96	33.96	33.96	33.96	33.96	33.96	33.96	33.96	33.96
2oc. paymonybaoo a.	55.55	55.55	00.00	55.55	55.50	00.00	55.55	55.55	55.50	55.55	55.50

Sugar

•Import levels are an important source of uncertainty for the US sugar sector.

- •While imports under the tariff rate quota (TRQ) for sugar are fairly predictable, it is much more difficult to estimate future sugar trade with Mexico.
- •The analysis looks at a range of possible outcomes for sugar trade, with important implications for sugar prices and farm program costs.

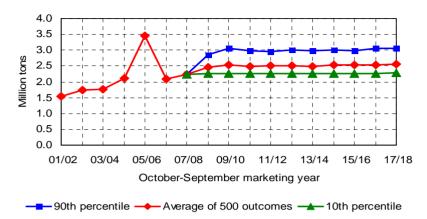
•Per capita consumption of sugar and HFCS has been declining, and a further modest reduction is projected.

- •Total domestic sugar deliveries increase slowly over the next ten years, as the effect of a growing population more than offsets the small projected decline in per capita consumption.
- •Even small deviations from the projected trends in sugar and sweetener consumption could have significant impacts on the outlook.

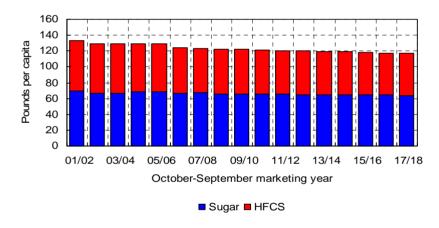
Projected average sugar prices consistently exceed the loan rate.

- •However, in years with above-average imports or production or below-average use, prices could fall to levels that would trigger sugar loan forfeitures.
- Average reported CCC stocks are small.
 This reflects a high probability of no forfeitures and a small probability of large forfeitures.

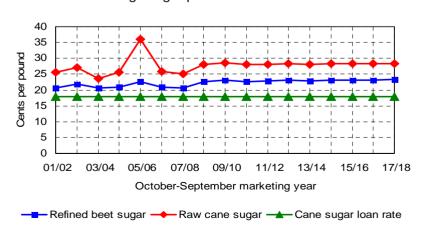
Sugar imports are uncertain



Per-capita sweetener consumption declines



Average sugar prices exceed loan rate



Sugar supply and utilization

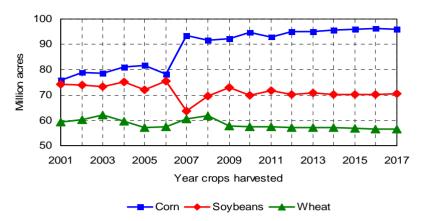
October-September year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Area					(M	illion acres	:)				
Sugar cane harvested	0.832	0.803	0.785	0.794	0.782	0.776	0.780	0.770	0.765	0.759	0.748
Sugar beet planted	1.270	1.141	1.209	1.219	1.213	1.207	1.213	1.196	1.204	1.195	1.189
Sugar beet harvested	1.247	1.102	1.168	1.178	1.172	1.167	1.172	1.156	1.164	1.155	1.149
Yield					(To	ns per acr	e)				
Cane Sugar	4.45	4.24	4.27	4.32	4.34	4.37	4.42	4.46	4.50	4.54	4.56
Beet Sugar	3.86	3.82	3.87	3.92	3.97	4.02	4.08	4.13	4.18	4.23	4.28
					(The	ousand tor	ns)				
Supply	12,556	12,026	12,030	12,163	12,246	12,294	12,416	12,472	12,559	12,619	12,662
Beginning stocks	1,799	1,967	1,614	1,625	1,686	1,691	1,699	1,739	1,732	1,754	1,766
Production	8,516	7,608	7,875	8,049	8,052	8,084	8,223	8,202	8,304	8,331	8,331
Cane sugar	3,697	3,406	3,353	3,428	3,397	3,391	3,445	3,432	3,441	3,441	3,412
Beet sugar	4,819	4,203	4,523	4,621	4,656	4,693	4,778	4,770	4,863	4,890	4,919
Imports	2,241	2,451	2,540	2,489	2,508	2,519	2,494	2,532	2,524	2,534	2,565
Total Use	10,589	10,412	10,405	10,477	10,555	10,596	10,677	10,741	10,805	10,853	10,899
Domestic deliveries	10,331	10,158	10,150	10,221	10,300	10,340	10,421	10,485	10,549	10,597	10,642
Exports	258	254	255	256	256	255	256	256	256	257	257
Residual	0	0	0	0	0	0	0	0	0	0	0
Ending Stocks	1,967	1,614	1,625	1,686	1,691	1,699	1,739	1,732	1,754	1,766	1,763
CCC inventory	0	25	18	19	25	27	27	23	26	24	19
Other stocks	1,966	1,589	1,606	1,667	1,665	1,671	1,712	1,708	1,729	1,742	1,744
Prices					(Cen	ts per pou	nd)				
New York spot raw sugar	20.53	22.65	23.05	22.66	22.86	23.00	22.79	23.05	23.06	23.08	23.26
Refined beet sugar	25.20	28.08	28.58	27.97	28.19	28.33	27.98	28.27	28.23	28.20	28.39
Cane loan rate	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Beet loan rate	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90	22.90

Land use

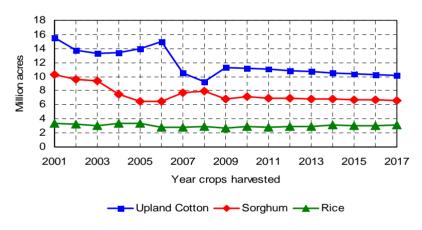
•Corn planted area expanded by 15 million acres in 2007, largely at the expense of soybeans.

- •Changes in relative returns lead to a recovery in projected soybean planted area in 2008, to 69.5 million acres, while corn area falls to 91.8 million acres.
- Spring wheat prices have been very strong since these estimates were prepared, so 2008 wheat area may exceed the projected levels.
- •Weak returns relative to other crops resulted in a four million acre reduction in upland cotton acreage in 2007 and a further projected decline in 2008, to 9.3 million acres.
- •Sorghum area recovered in 2007 because of high grain prices and returns, and could remain high in 2008.
- •Rice area declined in 2006 and 2007 because of weak returns relative to other crops, but could increase slightly in 2008.
- Because of higher returns to many crops, the total area planted to 12 major crops increased by more than three million acres in 2007.
- •Another four million acre increase is projected for 2008, with an increase in double cropping of wheat and soybeans and reduced CRP area accounting for much of the increase.
- Including changes in hay and CRP area, the increase in total area is five million acres in 2007 and two million in 2008.

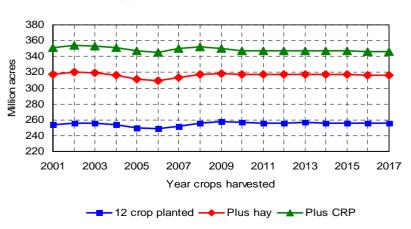
Soybean and wheat plantings increase in 2008



Cotton acreage declines again in 2008



12 crop planted area increases in 2008



Land use for major crops and the conservation reserve

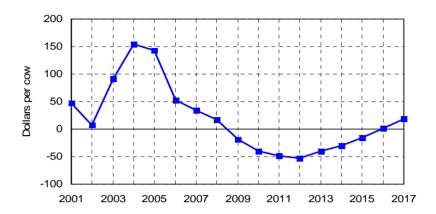
Crop marketing year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
Planted area					(M	illion acres	s)				
Corn	93.60	91.77	92.38	94.60	93.01	95.13	95.08	95.72	95.96	96.35	95.90
Soybeans	63.63	69.49	73.07	69.74	71.59	70.10	70.83	70.26	70.26	70.28	70.64
Wheat	60.43	61.71	57.77	57.60	57.44	57.27	57.14	57.15	56.84	56.57	56.53
Upland cotton	10.54	9.33	11.32	11.16	11.05	10.80	10.71	10.49	10.35	10.29	10.17
Sorghum	7.72	7.93	6.77	7.11	6.90	6.94	6.81	6.77	6.74	6.69	6.62
Barley	4.02	4.16	4.35	4.29	4.15	4.13	4.03	3.98	3.94	3.88	3.80
Oats	3.76	3.25	3.43	3.51	3.50	3.47	3.41	3.35	3.31	3.27	3.24
Rice	2.76	2.90	2.69	2.88	2.82	2.95	2.93	3.10	3.07	3.06	3.13
Sunflower seed	2.07	2.18	2.18	2.20	2.21	2.19	2.21	2.20	2.20	2.22	2.23
Peanuts	1.23	1.28	1.32	1.34	1.30	1.30	1.30	1.29	1.28	1.27	1.27
Sugar beets	1.27	1.14	1.21	1.22	1.21	1.21	1.21	1.20	1.20	1.20	1.19
Sugar cane (harvested)	0.83	0.80	0.78	0.79	0.78	0.78	0.78	0.77	0.76	0.76	0.75
12 crop planted area	251.86	255.94	257.28	256.45	255.98	256.27	256.44	256.27	255.92	255.83	255.45
Hay harvested area	61.63	61.74	61.25	61.18	61.12	61.09	61.11	61.11	61.06	60.96	60.85
12 crops + hay	313.49	317.69	318.53	317.63	317.10	317.36	317.55	317.38	316.98	316.79	316.31
Conservation reserve	36.80	34.50	31.97	29.96	29.90	29.83	29.79	29.79	29.78	29.76	29.73
12 crops + hay + CRP	350.29	352.18	350.50	347.59	347.00	347.19	347.34	347.17	346.76	346.55	346.04

Beef

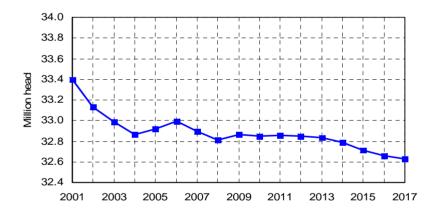
•Returns to cow-calf producers have declined from the high profitability levels of 2003-05.

- •The next few years could be financially difficult as high and rising input costs coincide with lower feeder cattle prices.
- •Despite the absence of large declines in fed steer prices, high corn prices will force feedlots to lower the amount of money they can pay for feeder cattle.
- •Uncertainty over BSE-induced trade barriers, extremely dry weather in various parts of the country and other external factors limited the amount of beef cow herd growth that would typically result from the profitability levels of 2003-05.
- •With returns expected at low or negative levels for the next few years, the window for beef cow herd inventory expansion has likely closed.
- •Cattle imports from Canada and Mexico topped 2.5 million head in 2007. This is the second highest total ever, although imports still accounts for less than seven percent of the domestic calf crop.
- •Beef exports have recovered about half of the quantity lost from the BSE-related disruptions that began in late 2003.
- Exports will continue to improve at a slow pace, due to high beef prices and limited penetration into Asian markets.

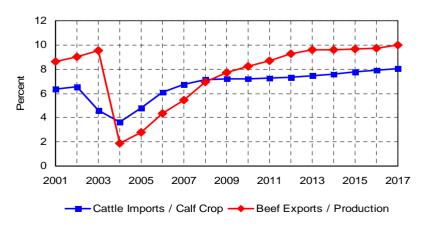
Cow-calf net returns continue to decline



No growth expected in beef cow inventory



Beef exports slowly regain pre-BSE status



Cattle sector

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
					(M	lillion head)				
Beef cows (Jan. 1)	32.9	32.8	32.9	32.8	32.9	32.8	32.8	32.8	32.7	32.7	32.6
Dairy cows (Jan. 1)	9.1	9.2	9.2	9.2	9.3	9.3	9.3	9.2	9.2	9.2	9.2
Cattle and calves (Jan. 1)	97.0	96.9	97.2	97.5	97.7	97.7	97.3	97.0	96.5	96.1	95.9
Calf crop	37.4	37.4	37.5	37.6	37.8	37.8	37.8	37.8	37.8	37.8	37.8
Calf death loss	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2
Calf slaughter	8.0	0.8	0.8	8.0	0.8	0.8	0.8	8.0	0.8	0.8	0.8
Beef cow slaughter	3.3	3.0	2.9	2.7	2.6	2.5	2.6	2.7	2.8	2.8	2.8
Dairy cow slaughter	2.6	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Bull slaughter	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Steer and heifer slaughter	28.0	27.9	28.3	28.9	29.5	29.9	29.9	29.7	29.5	29.2	29.1
Total slaughter	35.2	35.1	35.3	35.7	36.1	36.6	36.6	36.5	36.4	36.2	36.0
Cattle imports	2.5	2.7	2.7	2.7	2.8	2.8	2.8	2.9	2.9	3.0	3.0
Cattle exports	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.5	0.5	0.5
Cattle death loss	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.3
Residual	-0.1	0.0	0.1	0.3	0.4	0.4	0.4	0.4	0.3	0.2	0.2
Cattle and calves (Dec. 31)	96.9	97.2	97.5	97.7	97.7	97.3	97.0	96.5	96.1	95.9	95.8
Cattle on feed (Jan. 1)	14.3	14.4	14.3	14.3	14.4	14.6	14.5	14.3	14.2	14.2	14.2
Supply					(Mil	lion pound	s)				
Beginning stocks	630	600	602	608	632	680	696	704	708	707	701
Imports	3,165	3,313	3,475	3,565	3,585	3,534	3,541	3,531	3,574	3,621	3,698
Production	26,515	26,458	26,818	27,330	27,856	28,333	28,458	28,503	28,488	28,436	28,440
Total	30,310	30,371	30,894	31,504	32,073	32,547	32,695	32,738	32,771	32,764	32,838
Disappearance											
Domestic use	28,260	27,930	28,222	28,612	28,971	29,230	29,268	29,287	29,313	29,302	29,308
Exports	1,450	1,839	2,064	2,260	2,422	2,621	2,723	2,743	2,751	2,762	2,834
Total	29,710	29,769	30,286	30,871	31,393	31,851	31,991	32,031	32,064	32,064	32,142
Ending stocks	600	602	608	632	680	696	704	708	707	701	696
Per capita consumption						(Pounds)					
Carcass weight	93.3	91.4	91.6	92.0	92.4	92.4	91.8	91.1	90.4	89.6	88.9
Retail weight	65.3	64.0	64.1	64.4	64.7	64.7	64.2	63.7	63.3	62.7	62.2
Change	-0.5%	-2.0%	0.2%	0.5%	0.4%	0.0%	-0.7%	-0.8%	-0.7%	-0.9%	-0.8%
Prices											
1100 - 1300 lb., Nebraska						llars per cv					
direct steers	91.82	94.34	91.94	90.73	89.87	89.67	90.42	91.44	93.08	95.11	97.12
Change	7.5%	2.7%	-2.6%	-1.3%	-1.0%	-0.2%	0.8%	1.1%	1.8%	2.2%	2.1%
600 - 650 lb., Oklahoma City	445.50	100.10	400.00	00.04	00.04	00.00	00.50	400.00	100.10	440.54	445.40
feeder steers	115.52	109.16	102.02	98.01	96.34	96.09	99.50	102.39	106.46	110.51	115.10
Change	-1.8%	-5.5%	-6.5%	-3.9%	-1.7%	-0.3%	3.6%	2.9%	4.0%	3.8%	4.1%
Utility cows, Sioux Falls	51.93	54.21	52.11	51.59	51.38	51.52	53.04	53.81	55.44	57.37	59.00
Change	9.2%	4.4%	-3.9%	-1.0%	-0.4%	0.3%	2.9%	1.5%	3.0%	3.5%	2.8%
Boxed beef cutout	149.89	155.80	154.14 -1.1%	154.15	154.04 -0.1%	154.09 0.0%	155.12 0.7%	156.62 1.0%	159.35	162.67 2.1%	165.51 1.7%
Change	2.1%	3.9%	-1.176	0.0%		u.u% ars per pou		1.0%	1.7%	2.1%	1.7%
Beef retail	4.16	4.30	4.29	4.27	4.26	4.26	4.31	4.40	4.50	4.62	4.74
Change	4.7%	3.4%	-0.2%	-0.6%	-0.1%	-0.1%	1.2%	2.1%	2.3%	2.6%	2.7%
Cow-calf returns					(Dol	lars per co	w)				
Receipts	573.02	550.12	518.45	501.89	495.62	495.76	513.03	527.13	547.32	567.83	590.16
Feed expenses	152.27	143.48	139.80	139.75	140.61	142.52	143.67	143.96	143.57	142.59	142.05
Non-feed expenses	386.77	389.78	397.52	402.48	403.88	405.73	408.97	413.46	419.51	424.40	430.08
Mon-leed expenses											

Pork

•2007 hog supplies were large. The sow herd posted annual increases for the past eleven quarters and hog import growth was strong.

- Slaughter numbers will remain large this year, as recent decisions to cut the sow herd will have little effect on 2008 supply.
- Slaughter capacity has not been a major issue yet as in 1998-99. Recent increases in hog slaughter capacity have improved the demand for live hogs.

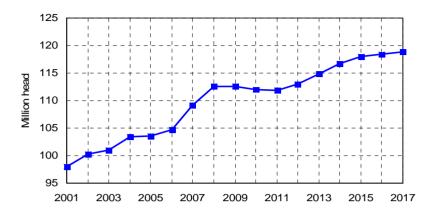
•Canada continues to send increasing volumes of hogs to the US, due to a less competitive hog processing sector.

- Pork exports grow every year, placing hog returns at much higher levels than the supply increases of the past few years would typically provide.
- •While pork production was two billion pounds (10 percent) higher in 2007 than in 2003, exports were 1.4 billion pounds (84 percent) higher.

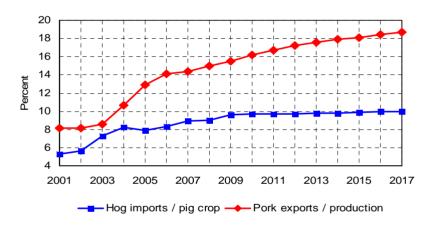
•Hog prices were down only slightly in 2007 on an annual basis, though prices were down sharply from 2006 during the last three months of the year.

- Low 2008 hog prices will lead to large financial losses for hog producers. As a result, sow numbers for the second half of 2008 and 2009 will be lower.
- Given expected input costs, hog prices will need to average 50-55 dollars per cwt in order to provide producers with historical average return levels.

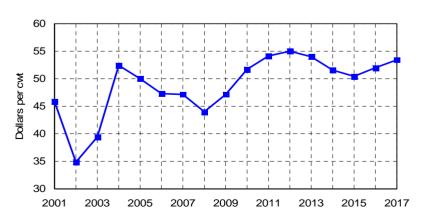
Another large increase in hog slaughter in 2008



Hog imports and pork exports grow



Hog prices fail to cover costs in 2008



Swine sector

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Calcridat year	2007	2000	2003	2010	2011	2012	2010	2014	2010	2010	2017
					(M	lillion head)				
Breeding herd (Dec. 1*)	6.09	6.16	6.05	5.89	5.82	5.83	5.86	5.90	5.90	5.87	5.83
Gilts added	3.51	3.44	3.30	3.27	3.29	3.31	3.35	3.35	3.31	3.28	3.21
Sow slaughter	3.38	3.49	3.40	3.27	3.22	3.22	3.25	3.28	3.29	3.26	3.23
Sows farrowed	11.96	11.99	11.80	11.66	11.67	11.77	11.91	12.03	12.07	12.06	12.02
Pigs per litter (head)	9.19	9.24	9.29	9.33	9.38	9.42	9.46	9.51	9.55	9.59	9.63
Market hogs (Dec. 1*)	56.4	59.0	59.3	59.1	58.6	58.9	59.5	60.3	60.8	61.0	61.3
Pig crop	109.9	110.8	109.6	108.8	109.4	110.9	112.8	114.4	115.2	115.7	115.8
Barrow and gilt slaughter	105.2	108.6	108.8	108.4	108.4	109.5	111.3	113.2	114.4	114.9	115.3
Hog imports	9.9	10.0	10.5	10.5	10.7	10.8	11.0	11.2	11.4	11.5	11.5
Hog exports	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Death loss/residual	11.9	11.8	11.4	11.3	11.3	11.4	11.6	11.8	11.9	11.9	11.9
Market hogs (Nov.30)	59.0	59.3	59.1	58.6	58.9	59.5	60.3	60.8	61.0	61.3	61.2
Supply					(Mil	lion pound	s)				
Beginning stocks	514	560	580	579	573	572	580	595	613	626	633
Imports	1,001	976	1,070	1,117	1,137	1,144	1,117	1,082	1,066	1,052	1,092
Production	21,959	22,693	22,792	22,761	22,827	23,125	23,593	24,077	24,435	24,646	24,834
Total	23,474	24,229	24,442	24,458	24,536	24,841	25,290	25,754	26,115	26,324	26,558
Disappearance											
Domestic use	19,754	20,250	20,320	20,201	20,140	20,280	20,551	20,824	21,073	21,153	21,277
Exports	3,160	3,400	3,543	3,684	3,824	3,982	4,144	4,317	4,415	4,538	4,643
Total	22,914	23,649	23,863	23,885	23,965	24,262	24,695	25,141	25,489	25,691	25,920
Ending stocks	560	580	579	573	572	580	595	613	626	633	638
Per capita consumption						(Pounds)					
Carcass weight	65.2	66.3	65.9	65.0	64.2	64.1	64.4	64.8	65.0	64.7	64.5
Retail weight	50.6	51.4	51.2	50.4	49.8	49.8	50.0	50.2	50.4	50.2	50.1
Change	2.7%	1.6%	-0.5%	-1.4%	-1.1%	-0.2%	0.5%	0.5%	0.4%	-0.4%	-0.2%
Prices											
Nat. base 51-52% lean equiv					(Dollars p	er hundred	dweight)				
barrows & gilts	47.09	44.06	47.20	51.69	54.16	55.01	53.98	51.58	50.45	52.01	53.44
Change	-0.4%	-6.4%	7.1%	9.5%	4.8%	1.6%	-1.9%	-4.5%	-2.2%	3.1%	2.8%
IA-S MN #1-2, 300-400 lb.											
sows	35.56	33.90	37.77	42.89	45.58	46.58	45.51	43.22	41.71	42.94	43.89
Change	-1.9%	-4.7%	11.4%	13.5%	6.3%	2.2%	-2.3%	-5.0%	-3.5%	2.9%	2.2%
Pork cutout value	67.54	66.60	70.68	76.43	79.58	81.27	80.81	79.35	78.61	79.87	80.83
Change	-0.1%	-1.4%	6.1%	8.1%	4.1%	2.1%	-0.6%	-1.8%	-0.9%	1.6%	1.2%
Dark note!!	6.6=	6.66	6.64	6.67		ars per pou	-	6.66	6.05	0.00	0.0=
Pork retail Change	2.87 2.2%	2.86 -0.5%	2.91 1.7%	3.04 4.6%	3.19 4.9%	3.28 2.8%	3.27 -0.2%	3.26 -0.4%	3.25 -0.3%	3.29 1.3%	3.37 2.2%
Formery finish reference					(Dollars -	or burnels:	المامنمالية				
Farrow-finish returns	40.00	4F 20	40 E0	E2 26		er hundred		E2 40	E4 00	E2 E4	E4 04
Receipts	48.20	45.29	48.58	53.26	55.80	56.70	55.64	53.19	51.99	53.54	54.94
Feed expenses	25.76	33.28	31.99	30.70	30.27	30.62	30.27	30.12	30.40	30.17	30.05
Non-feed expenses	21.28	21.79	21.82	21.97	22.07	22.14	22.19	22.34	22.52	22.66	22.81
Net returns	1.16	-9.78	-5.23	0.58	3.47	3.93	3.18	0.73	-0.93	0.71	2.08

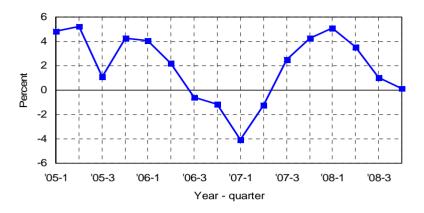
^{*} Preceding year

Poultry

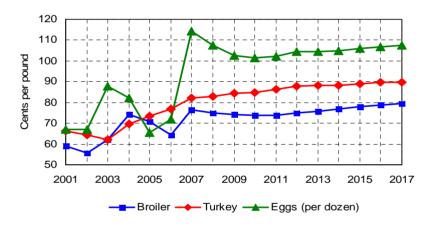
•Chicken producers have rapidly adjusted production since 2006 in response to volatile profitability.

- •Four consecutive quarters of production declines, resulting from low chicken prices in early 2006, gave way to strong growth at the end of 2007 as returns improved.
- •Ample supplies of chicken and pork in early 2008 will again cause producers to limit growth. Long term production growth is expected to be one to two percent.
- •All poultry prices increased in 2007, led by wholesale egg prices which jumped by nearly 60 percent.
- •Despite the output price increases for chicken and turkey, profitability as measured by feed-price ratios fell to the second-lowest levels since 1997.
- •High expected corn and soybean meal prices will require historically high poultry prices in order to allow producers to remain viable.
- •The importance of exports to the poultry industry is not fully captured by merely measuring exports as a percentage of production, because dark meat products less favored by US consumers are most popular to international buyers.
- The sporadic outbreaks of avian influenza around the world in recent years have not yet significantly impacted world poultry demand, though this threat remains a risk factor for US export levels.

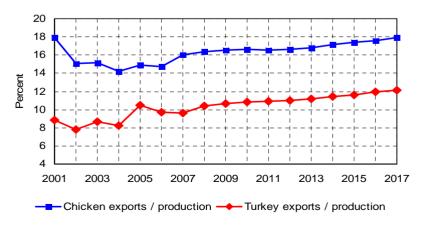
Chicken production adjusts quickly



Poultry prices reached record levels in 2007



Exports are vital to the poultry industry outlook



Poultry supply and use

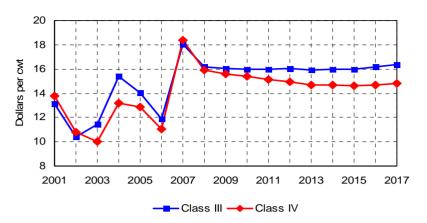
Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Broiler					(Mil	lion pound	s)				
Production	35,492	36,348	36,882	37,211	37,647	38,101	38,620	39,165	39,712	40,255	40,872
Domestic use	29,921	30,413	30,757	31,041	31,477	31,844	32,217	32,527	32,892	33,251	33,633
Exports	5,701	5,939	6,097	6,179	6,231	6,335	6,482	6,719	6,903	7,090	7,326
Ending stocks	675	731	825	888	901	901	903	907	911	915	921
Turkey											
Production	5,825	5,840	5,809	5,795	5,805	5,838	5,889	5,946	5,999	6,051	6,110
Domestic use	5,256	5,234	5,195	5,182	5,188	5,211	5,248	5,284	5,317	5,348	5,385
Exports	562	605	618	626	633	644	657	678	699	721	743
Ending stocks	235	248	258	258	258	256	256	259	260	262	265
Eggs					(Mil	lion dozen	s)				
Production	7,518	7,569	7,635	7,685	7,738	7,792	7,845	7,897	7,945	7,997	8,054
Domestic use	6,274	6,346	6,400	6,441	6,482	6,523	6,563	6,601	6,637	6,677	6,721
Hatching eggs	1,012	1,008	1,010	1,010	1,012	1,015	1,019	1,025	1,031	1,037	1,044
Exports	246	230	239	249	259	269	278	287	294	300	306
Ending stocks	13	12	12	12	12	12	12	12	12	12	12
Prices					(Cen	ts per pou	nd)				
12 city wholesale broiler	76.37	74.93	74.22	73.93	73.94	75.08	75.77	76.72	77.88	78.88	79.68
Broiler retail	165.11	167.82	170.53	172.19	173.77	176.40	178.41	180.68	183.22	185.69	187.77
East. region whlsle turkey	82.14	82.89	84.27	84.94	86.16	87.78	88.18	88.33	89.08	89.63	89.91
Turkey retail	114.99	117.00	118.19	119.90	121.80	123.79	125.11	126.13	127.13	127.87	128.31
					(Cen	ts per doz	en)				
NY Grade A large eggs	114.36	107.38	102.53	101.37	102.37	104.31	104.64	104.89	106.12	106.90	107.50
Shell egg retail	167.63	164.06	159.17	157.64	159.52	162.78	164.96	167.15	170.19	172.97	175.60
Per capita consumption						(Pounds)					
Broiler	98.8	99.5	99.8	99.9	100.4	100.7	101.0	101.1	101.4	101.7	102.0
Turkey	17.4	17.1	16.9	16.7	16.5	16.5	16.5	16.4	16.4	16.4	16.3
						(Eggs)					
Eggs	248.6	249.3	249.2	248.6	248.1	247.6	247.0	246.3	245.6	245.0	244.6
Feed-price ratios						(Ratio)					
Broiler	5.4	4.7	4.9	5.1	5.2	5.3	5.4	5.4	5.5	5.6	5.7
Turkey	5.9	5.2	5.6	5.9	6.1	6.3	6.4	6.3	6.4	6.4	6.5
Eggs	10.1	8.3	8.0	8.0	8.2	8.4	8.4	8.4	8.5	8.5	8.6

Dairy prices

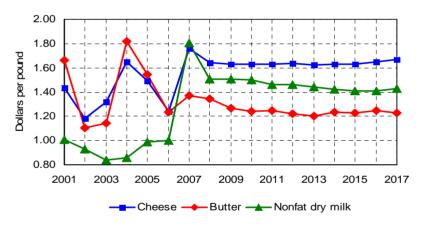
■2007 Class III and Class IV prices were at record levels of \$18.04 and \$18.36 per cwt, respectively.

- •For the first time since 2002, the 2007 Class IV price exceeded the Class III price due to strong international skim milk powder prices.
- •The Class III price is expected to exceed the Class IV price throughout the baseline due to weaker world skim milk powder prices.
- •Strong international demand led to record nonfat dry milk and cheese prices in 2007.
- •World dairy prices are expected to soften in 2008 but still remain at high levels relative to historical standards.
- •US wholesale butter prices are closest to the government support level, which suggests a greater chance of butter entering government storage than other dairy products.
- The 2007 all-milk price set an all-time record of \$19.15 per cwt The 2008 all-milk price is projected to decline to \$17.38 per cwt, still the second highest level on record.
- The volatility in milk prices that has occurred over the past ten years is expected to continue. The 10th and 90th percentiles indicate that 80 percent of model outcomes result in an all-milk price between \$15 and \$19 per cwt.

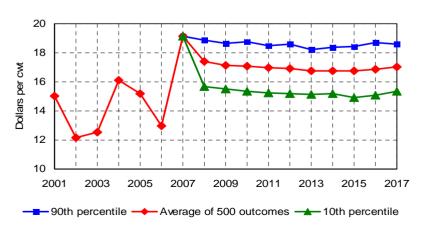
Class IV milk price leads class III in 2007



World price strength propels 2007 dairy prices



All milk price volatility will continue



Dairy sector

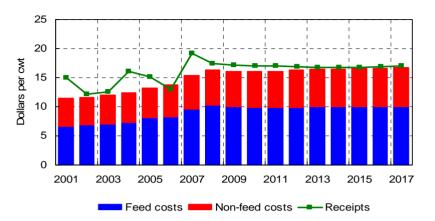
Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
US milk supply											
Dairy cows (thou. head)	9,153	9,260	9,230	9,247	9,259	9,261	9,252	9,238	9,223	9,210	9,203
Milk yield per cow (lbs.)	20,279	20,574	20,906	21,220	21,522	21,804	22,080	22,360	22,629	22,911	23,182
Milk production (bil. lbs.)	185.6	190.5	193.0	196.2	199.3	201.9	204.3	206.6	208.7	211.0	213.3
Min. FMMO class prices					(Dollars p	er hundred	dweight)				
Class I mover	18.14	16.59	16.41	16.34	16.32	16.23	16.11	16.09	16.17	16.29	16.45
Class II	18.36	15.90	15.60	15.37	15.14	14.95	14.71	14.66	14.61	14.70	14.78
Class III	18.04	16.20	16.03	16.01	16.01	16.03	15.93	15.96	16.01	16.19	16.38
Class IV	18.36	15.91	15.60	15.38	15.14	14.95	14.71	14.66	14.61	14.70	14.78
All-milk price	19.15	17.38	17.16	17.06	16.98	16.90	16.75	16.74	16.76	16.89	17.03
MILC payment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
Wholesale prices					(Dolla	ars per pou	und)				
Butter, CME	1.37	1.34	1.27	1.24	1.25	1.22	1.20	1.23	1.23	1.25	1.23
Cheese, Am., 40 lb., CME	1.76	1.64	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.65	1.67
Nonfat dry milk, AA	1.80	1.51	1.51	1.50	1.46	1.46	1.44	1.42	1.41	1.41	1.43
Evaporated	1.94	1.76	1.76	1.77	1.77	1.77	1.77	1.77	1.78	1.79	1.80
Dairy product production					(Mil	lion pound	s)				
American cheese	3,878	4,090	4,148	4,217	4,294	4,369	4,440	4,499	4,560	4,616	4,672
Other cheese	5,790	5,996	6,129	6,292	6,460	6,611	6,773	6,905	7,067	7,206	7,351
Butter	1,540	1,623	1,644	1,688	1,693	1,689	1,674	1,672	1,656	1,656	1,656
Nonfat dry milk	1,476	1,635	1,697	1,808	1,882	1,952	1,993	2,057	2,103	2,182	2,270

Milk production

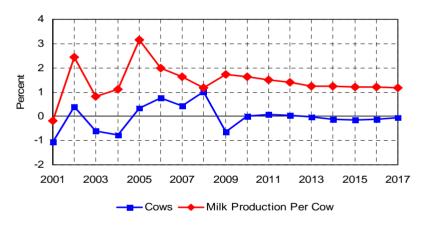
- •The cost of producing milk has increased rapidly due to higher feed costs and energy-related inputs.
- •Even with the second highest all-milk price ever expected in 2008, receipts will barely reach breakeven levels.
- •The growth in milk production costs is expected to level off after 2008 but remain at historically high levels.

- •The dairy cow herd has increased every year since 2005, and 2008 is expected to show continued growth.
- •The growth in cow numbers reverses a long-term trend of declining dairy cow inventories.
- The growth in milk per cow is expected to stay between one and two percent over the baseline. New technology or adverse weather could move the industry outside of this range for any given year.
- After expanding by only 5.6 billion pounds during the 2001 to 2004 period, milk production growth accelerated to 14.7 billion pounds from 2004 to 2007.
- •Milk production is projected to grow by 1.4 percent annually in the baseline.
- •The pace of the regional movement of milk production is expected to continue, but at a slower rate than the past decade.

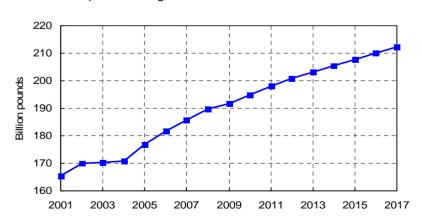
High production costs offset milk price increases



Dairy cow inventory continues to grow in 2008



Milk production growth has increased since 2005



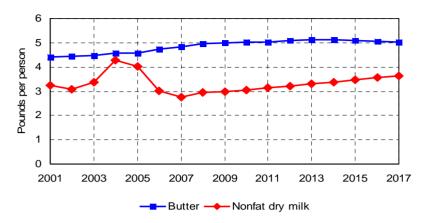
Dairy cows by state

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
					(Tho	usand hea	d)				
Alabama	13	13	12	12	12	11	11	11	10	10	10
Alaska	1	1	1	1	1	1	1	1	1	1	1
Arizona	181	189	194	200	205	209	213	217	220	223	226
Arkansas	17	15	13	12	10	10	9	8	8	8	8
California	1,810	1,858	1,879	1,906	1,930	1,950	1,967	1,983	1,997	2,010	2,022
Colorado	118	124	128	131	134	136	137	138	139	139	139
Connecticut	19	19	19	18	18	18	17	17	17	16	16
Delaware	7	7	6	6	6	6	5	5	5	5	5
Florida	127	125	120	118	116	114	112	110	108	107	105
Georgia	77	77	77	76	76	76	75	75	74	73	73
Hawaii	3	3	3	3	3	3	3	3	3	3	3
Idaho	513	539	555	573	589	603	614	625	635	644	653
Illinois	103	103	101	100	98	97	95	93	91	90	88
Indiana	167	168	166	165	164	164	163	162	161	161	161
Iowa	213	220	222	224	226	227	228	228	227	227	226
Kansas	109	110	110	112	113	114	115	115	115	115	115
Kentucky	90	88	85	83	80	78	76	74	71	70	68
Louisiana	29	27	25	24	22	21	20	19	18	17	16
Maine	33	33	32	32	32	32	31	31	31	31	31
Maryland	58	55	52	49	46	44	42	40	38	36	35
Massachusetts	15	14	13	12	11	11	10	10	10	10	10
Michigan	334	342	340	340	340	339	338	336	334	332	330
Minnesota	460	469	470	472	474	474	474	472	470	468	466
Mississippi	21	21	19	18	17	16	16	15	14	14	13
Missouri	112	109	103	99	95	91	87	83	79	75	72
Montana	18	17	17	16	16	16	16	16	16	16	17
Nebraska	59	56	53	51	49	47	46	44	43	43	42
Nevada	27	27	27	27	27	27	27	27	27	27	27
New Hampshire	14	13	13	12	12	12	11	11	11	11	11
New Jersey	10	10	9	8	8	7	7	6	6	6	6
New Mexico	342	337	326	319	315	310	308	306	305	304	306
New York	627	621	613	609	606	602	599	596	593	591	590
North Carolina	48	45	42	40	38	37	35	34	33	33	32
North Dakota	29	27	24	21	19	17	15	14	13	12	11
Ohio	276	278	275	274	274	273	272	271	271	270	270
Oklahoma	69	67	66	65	64	64	63	62	61	61	60
Oregon	113	112	113	113	114	114	115	114	114	114	114
Pennsylvania	550	549	544	541	537	533	528	523	517	512	506
Rhode Island	1	1	1	1	1	1	1	1	1	1	1
South Carolina	18	18	18	18	18	17	17	17	16	16	16
South Dakota	85	87	87	86	86	85	84	83	83	82	81
Tennessee	63	60	56	52	49	46	43	40	37	34	32
Texas	348	366	376	386	395	403	409	413	417	420	423
Utah	85	85	84	82	82	81	80	79	79	78	78
Vermont	140	140	139	138	137	136	135	134	132	131	129
Virginia	100	99	96	94	92	91	89	88	86	85	84
Washington	238	240	240	240	240	240	239	238	237	235	234
West Virginia	13	13	13	12	12	12	12	11	11	11	11
Wisconsin	1,248	1,256	1,247	1,244	1,241	1,238	1,235	1,232	1,228	1,226	1,226
Wyoming	7	7	7	7	7	7	7	7	7	7	7
United States	9,153	9,260	9,230	9,247	9,259	9,261	9,252	9,238	9,223	9,210	9,203

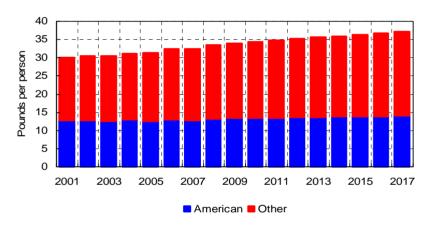
Dairy products

- Butter consumption is expected to remain near five pounds per person over the baseline.
- •Modest growth in per capita nonfat dry milk consumption is projected over the baseline, as nonfat dry milk prices recede from their record-setting levels of 2007.
- Stronger international markets for powder products would limit the growth in nonfat dry milk consumption.
- Per capita cheese consumption growth remains important to the overall dairy outlook. A slowdown in consumption growth will limit the growth in milk supplies.
- •A majority of the growth in per capita cheese consumption occurs in types other than American cheese.
- •Total per capita cheese consumption reaches 37 pounds by 2017, an increase of 4.5 pounds from the 2007 level.
- •US trade in butter and cheese is small relative to production. Thus, domestic production and consumption are similar except when stocks build or decline.
- •The drawdown of government nonfat dry milk stocks allowed for large exports without compromising domestic availability in 2004 and 2005.
- With over 40 percent of domestic nonfat dry milk production now consumed outside of the US, a new source of volatility for the US dairy market exists.

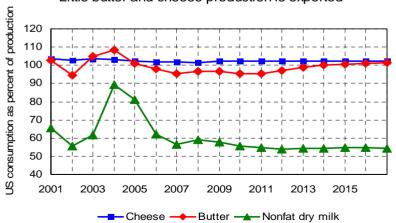
High prices decrease nonfat dry milk consumption



Cheese consumption continues to grow



Little butter and cheese production is exported



Dairy product supply and use

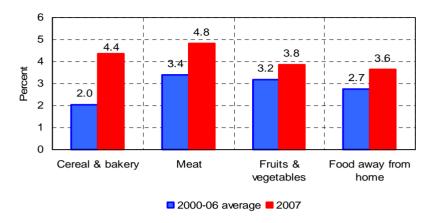
Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Butter					(Milli	ion pounds	s)				
Production	1,540	1,623	1,644	1,688	1,693	1,689	1,674	1,672	1,656	1,656	1,656
Imports	37	44	46	47	51	50	50	56	53	56	56
Domestic use	1,468	1,494	1,526	1,554	1,571	1,618	1,641	1,652	1,662	1,658	1,664
Total foreign use	78	81	96	116	116	91	61	46	36	31	26
Ending stocks	140	233	301	367	424	454	476	506	517	541	563
CCC net remov. incl. DEIP	0	88	64	65	57	29	23	32	11	24	21
American cheese											
Production	3,878	4,090	4,148	4,217	4,294	4,369	4,440	4,499	4,560	4,616	4,672
Imports	51	51	51	51	51	51	51	51	51	51	51
Domestic use	3,881	4,068	4,137	4,197	4,259	4,334	4,401	4,466	4,510	4,570	4,635
Total foreign use	60	27	49	56	70	71	75	72	88	86	77
Ending stocks	522	568	581	595	610	625	640	652	664	675	686
CCC net remov. incl. DEIP	0	0	0	0	0	023	0	0	0	0	0
Other cheese	U	O	U	U	U	U	U	O	O	O	U
Production	5,790	5,996	6,129	6,292	6,460	6,611	6,773	6,905	7,067	7,206	7,351
	3,790	405	409	413	417	421	426	430	434	439	443
Imports											
Domestic use	5,969	6,217	6,371	6,544	6,716	6,871	7,037	7,174	7,340	7,484	7,633
Total foreign use	189	179	169	159	159	159	159	159	159	159	159
Ending stocks	290	295	294	296	298	301	304	306	309	310	313
Nonfat dry milk	4 470	4 005	4 007	4 000	4 000	4.050	4 000	0.057	0.400	0.400	0.070
Production	1,476	1,635	1,697	1,808	1,882	1,952	1,993	2,057	2,103	2,182	2,270
Imports	5	5	5	5	5	5	5	5	5	5	5
Domestic use	832	929	952	979	1,014	1,045	1,081	1,120	1,158	1,201	1,241
Total foreign use	600	696	748	829	874	909	914	941	948	986	1,035
Ending stocks	157	172	174	177	177	180	182	184	186	186	185
Government	0	2	3	3	0	1	4	4	7	5	2
Commercial	157	170	171	175	177	178	178	180	180	181	183
CCC net remov. incl. DEIP	-27	2	1	0	-3	1	3	0	2	-2	-2
Evap. and condensed milk											
Production	664	631	628	628	629	627	626	624	621	618	614
Imports	12	12	12	12	12	12	12	12	12	12	12
Domestic use	621	586	584	584	584	582	581	579	577	574	570
Total Foreign Use	56	56	56	56	56	56	56	56	56	56	56
Ending Stocks	30	31	31	31	31	32	32	32	32	32	32
Per capita consumption					(Pounds)					
Butter	4.8	4.9	5.0	5.0	5.0	5.1	5.1	5.1	5.1	5.1	5.0
Nonfat dry milk	2.7	3.0	3.1	3.2	3.2	3.3	3.4	3.5	3.6	3.7	3.8
Total cheese	32.5	33.7	34.1	34.6	35.0	35.4	35.9	36.2	36.5	36.9	37.2
American	12.8	13.3	13.4	13.5	13.6	13.7	13.8	13.9	13.9	14.0	14.1
Other	19.7	20.3	20.7	21.1	21.4	21.7	22.1	22.3	22.6	22.9	23.2
Total fluid milk	206.2	200.3	199.4	198.6	197.8	196.8	195.5	194.1	192.4	190.8	189.3
Ice eream	23.8	23.8	23.7	23.7	23.6	23.5	23.5	23.3	23.2	23.1	23.0
Retail prices					(Doll	ars per un	it)				
Butter, salted, AA, stick/lb.	3.03	3.11	3.05	3.09	3.14	3.13	3.12	3.19	3.20	3.25	3.25
Cheese, natural cheddar/lb.	4.23	4.07	4.08	4.12	4.19	4.24	4.28	4.33	4.40	4.50	4.59
Milk, fresh, whole fort./gal.	3.50	3.73	3.70	3.69	3.69	3.68	3.66	3.66	3.67	3.69	3.71
Ice cream/half gallon	3.95	3.85	3.87	3.89	3.95	4.00	4.02	4.04	4.06	4.10	4.13

Food prices and expenditures

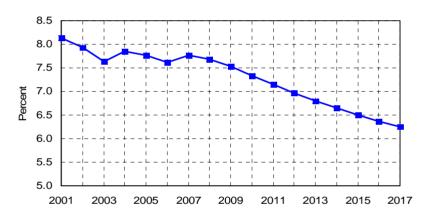
•All major components of the consumer price index (CPI) for food grew at historically high rates in 2007.

- Dairy and cereal and bakery showed the largest categorical increases relative to normal growth levels.
- •Following another expected sharp increase in 2008 (3.7 percent) and a moderate increase in 2009 (2.5 percent), the long term annual growth in the CPI for food will average near two percent.
- •Even moderately rising food costs can have important negative effects on households with below average income. Viewed in light of the entire US economy, however, food expenditures comprise a very small share of income.
- •The long-term decline in the share of income spent on food has halted since 2003, as higher food and energy costs resulted in increased food expenditures.
- •The historical decline in food spending share will resume in the longer term, as income growth outpaces food inflation.
- •There is a correlation between the farm value of food products and food prices seen by consumers at retail outlets.
- •However, many other factors account for a larger share of food costs. Labor, fuel and packaging costs are some of the most important non-commodity costs.
- •Total food expenditures will grow by nearly 30 percent in the next decade, but will decline after 2009 when adjusted for inflation, as growth in non-commodity costs slows.

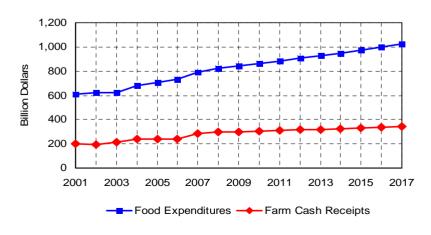
All CPI for food components increase in 2007



Food expenses a small share of disposable income



Much value is added between farm and retail



Consumer price indices for food

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
					(Index	1982-84=	100)				
CPI for food	202.9	210.4	215.6	219.7	223.8	228.2	232.5	236.9	241.8	246.9	252.1
(Inflation rate)	4.0%	3.7%	2.5%	1.9%	1.9%	2.0%	1.9%	1.9%	2.1%	2.1%	2.1%
Food at home	201.2	209.0	214.2	217.9	221.7	225.7	229.5	233.6	238.2	242.9	247.7
Cereal and bakery	222.1	232.1	238.0	241.4	245.0	248.7	252.4	256.2	259.9	263.6	267.4
Meat	195.6	201.9	205.7	208.7	211.9	215.4	218.9	222.5	226.7	231.6	236.5
Dairy	194.8	203.8	208.1	211.7	215.5	219.5	223.3	227.4	232.1	237.0	242.0
Fruit and vegetables	262.6	272.6	282.0	288.3	294.4	300.9	307.2	313.8	321.1	328.6	336.0
Other food at home	173.3	179.1	182.9	185.8	188.5	191.4	194.2	197.1	200.4	203.7	206.9
Sugar and sweets	176.8	179.7	182.2	185.9	188.6	191.1	193.8	196.6	199.5	202.6	205.7
Fats and oils	172.9	180.8	184.7	187.7	191.4	194.6	197.6	200.5	204.0	207.6	211.2
Other prepared items	188.2	194.1	197.9	200.5	203.1	205.8	208.5	211.3	214.3	217.4	220.5
Non-alc. beverages	153.4	159.7	163.7	166.6	169.3	172.4	175.4	178.5	182.1	185.6	189.0
Food away from home	206.7	213.7	219.0	223.5	228.2	233.1	237.8	242.7	248.0	253.6	259.3

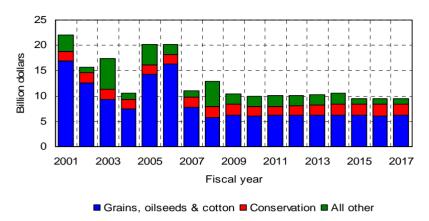
Per capita consumer expenditures for food

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
					(Dolla	rs per cap	ita)				
Food at home	1,473	1,519	1,540	1,557	1,574	1,592	1,606	1,622	1,642	1,665	1,687
Cereal and bakery	192	205	205	206	207	209	210	212	214	216	218
Meat	340	346	351	353	356	360	362	364	368	373	378
Dairy	180	176	176	177	178	179	180	181	182	184	187
Fruit and vegetables	239	245	251	255	259	263	267	271	276	280	285
Other food at home	522	546	558	566	573	580	586	593	601	610	619
Sugar and sweets	51	52	52	53	53	53	53	54	54	54	54
Fats and oils	38	46	47	48	49	50	50	51	51	52	53
Miscellaneous	275	286	291	295	299	303	307	310	315	320	326
Trips	20	21	21	22	22	23	23	23	24	24	25
Non-alc. beverages	138	142	147	148	150	152	153	155	157	160	162
Food away from home	1,136	1,172	1,196	1,221	1,248	1,276	1,300	1,325	1,354	1,384	1,415
Total per capita	2,609	2,691	2,737	2,779	2,822	2,867	2,906	2,947	2,996	3,049	3,103
Multiply by population for:	(Billion dollars)										
Total food expenditures	790.1	822.1	843.4	863.8	884.6	906.6	926.8	947.8	971.6	997.1	1,022.9

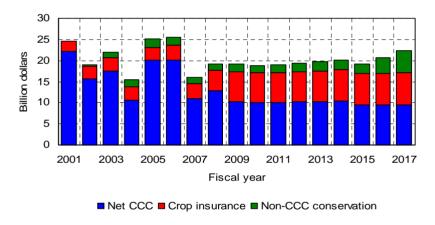
Government costs

- •Net CCC outlays fell sharply in FY 2007, as higher commodity prices reduced spending on marketing loans and countercyclical payments.
- Conservation spending in the CCC account primarily reflects CRP outlays.
- Disaster spending approved in 2007 increases FY 2008 CCC outlays. Outlays drop in FY 2015 when tobacco buyout payments cease.
- •Mandatory government outlays under the crop insurance program and certain conservation programs are not included in the CCC account.
- •Crop insurance outlays increase with crop prices, as premiums and premium subsidies increase with crop values.
- •Increases in crop insurance spending and outlays on non-CCC conservation programs mean that CCC outlays are a declining share of mandatory outlays.
- •CRP spending reflects changes in CRP area under contract and increased rental rates when new contracts are signed.
- •For other mandatory conservation programs, projected expenditures are based on preliminary estimates from the Congressional Budget Office (CBO).
- •The large increase shown in FY 2016 results from increased spending on the Conservation Security Program (CSP). Funding for CSP is capped until FY 2015.

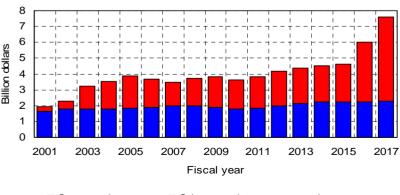
CCC expenditures fall as commodity prices rise



Crop insurance outlays increase as prices rise



Conservation outlays rise when CSP caps expire



■ Conservation reserve ■ Other mandatory conservation programs

Net government outlays on farm and conservation programs

Fiscal year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Feed grains					(Mi	llion dollar	s)				
Corn	3,195	2,002	2,140	2,109	2,123	2,089	2,111	2,101	2,103	2,093	2,112
Sorghum	150	196	195	195	196	196	196	196	195	196	196
Barley	58	84	83	83	81	83	82	82	82	82	82
Oats	2	3	4	4	4	4	4	4	4	4	4
Food grains											
Wheat	729	1,228	1,151	1,157	1,145	1,150	1,145	1,154	1,145	1,150	1,149
Rice	337	432	455	488	474	481	453	470	449	452	464
Oilseeds											
Soybeans	337	507	613	621	590	593	586	606	602	580	601
Peanuts	336	108	96	109	127	135	132	134	142	144	144
Other oilseeds	6	22	21	20	21	20	20	21	20	20	20
Other commodities											
Upland cotton	2,592	1,118	1,441	1,285	1,384	1,402	1,422	1,431	1,397	1,390	1,393
Sugar	25	-12	31	17	39	29	24	40	20	37	28
Dairy	159	88	71	61	52	24	39	61	48	60	55
CCC conservation											
Conservation reserve	1,963	2,012	1,875	1,787	1,833	1,999	2,129	2,241	2,236	2,243	2,270
Other CCC conservation	29	140	241	111	5	0	0	0	0	0	0
Tobacco trust fund	934	960	960	960	960	960	960	960	0	0	0
Other CCC											
Disaster payments, NAP	178	3,679	315	315	315	315	315	315	315	315	315
Other net costs	11	383	640	692	696	691	690	696	684	680	688
Net CCC outlays	11,040	12,950	10,332	10,014	10,044	10,169	10,308	10,513	9,442	9,448	9,519
NRCS conservation	1,497	1,594	1,724	1,752	1,966	2,162	2,231	2,299	2,370	3,755	5,324
Crop insurance	3,550	4,709	7,087	7,070	7,043	7,105	7,236	7,370	7,451	7,510	7,533
Total mandatory outlays	16,088	19,253	19,143	18,835	19,054	19,436	19,775	20,182	19,263	20,713	22,376

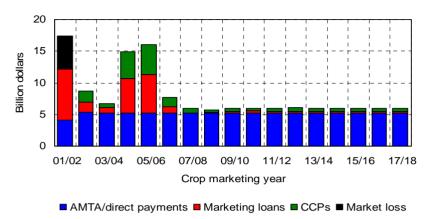
Note: "NRCS conservation" denotes mandatory spending on conservation programs authorized by the 2002 farm bill that is not included in reported CCC outlays.

Payments and crop insurance

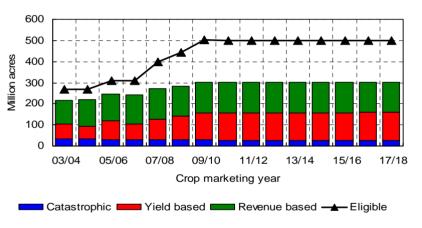
- •Higher prices have largely eliminated marketing loan benefits and CCPs for most grains and oilseeds.
- •Cotton, rice and peanuts account for almost all of the modest marketing loan benefits and CCPs after 2007/08.
- •In only a handful of the 500 stochastic outcomes are there any marketing loan benefits or CCPs for wheat, feed grains or soybeans.
- •Eligibility for crop insurance has been expanded to include pasture land.
- •Most of the new land enrolled in 2007/08 is pasture land under what are classified here as yield-based policies.
- •Revenue-based products continue to account for the largest share of enrolled acreage and most of the premiums and indemnities.

- •For five straight years, the crop insurance loss ratio (indemnities divided by total premiums, including premium subsidies) has been less than 1.0.
- The baseline assumes an average loss ratio of 1.0. Actual loss ratios will vary based on crop yields and market prices
- •Total premiums and premium subsidies jump in 2007/08 and 2008/09, primarily because higher expected prices increase the value of crops covered.

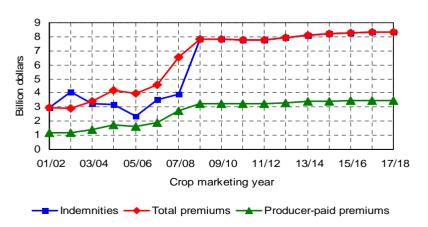
Higher prices reduce marketing loans, CCPs



More land eligible and enrolled in crop insurance



Crop insurance subsidies rise with higher prices



Selected direct government payments

Marketing year	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18
					(Mil	llion Dollar	s)				
Direct payments	5,182	5,186	5,192	5,196	5,196	5,196	5,197	5,197	5,197	5,197	5,197
Marketing loans	0	204	271	337	321	324	300	275	273	305	280
Countercyclical payments	812	337	441	490	473	519	525	518	498	464	484
Total	5,994	5,727	5,904	6,022	5,990	6,039	6,021	5,990	5,968	5,965	5,961

Note: Includes direct payments, marketing loan benefits (loan deficiency payments and marketing loan gains) and countercyclical payments for feed grains, food grains, oilseeds and upland cotton.

Crop insurance

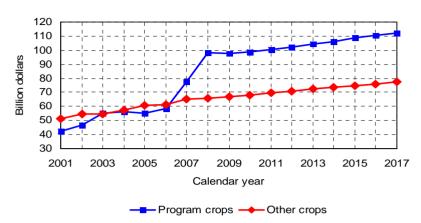
Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
				(Million acr	es, market	ing year)				
Eligible acres	399.7	444.1	501.6	500.8	500.0	500.1	500.4	500.7	500.5	500.3	499.8
Net acres insured	271.7	285.0	303.5	302.5	302.0	302.2	302.6	303.1	303.2	303.3	303.3
Catastrophic	28.4	28.0	28.1	27.8	27.8	27.8	27.8	27.8	27.8	27.8	27.9
Yield buy-up	99.6	111.9	130.1	129.9	129.9	130.0	130.2	130.4	130.5	130.7	130.8
Revenue-based	143.7	145.0	145.4	144.8	144.3	144.4	144.7	145.0	144.9	144.9	144.6
Crop insurance											
Participation rate	68.0%	64.2%	60.5%	60.4%	60.4%	60.4%	60.5%	60.5%	60.6%	60.6%	60.7%
				(Billion dolla	ars, marke	ting year)				
Total premiums	6.56	7.82	7.82	7.76	7.79	7.93	8.11	8.20	8.29	8.31	8.33
Producer-paid premiums	2.74	3.27	3.26	3.24	3.25	3.31	3.39	3.43	3.46	3.48	3.48
Premium subsidies	3.82	4.55	4.55	4.52	4.54	4.62	4.72	4.77	4.82	4.84	4.85
Total indemnities	3.94	7.82	7.82	7.76	7.79	7.93	8.11	8.20	8.29	8.31	8.33
Loss ratio	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	(Billion dollars, fiscal year)										
Total obligations	4.82	5.49	9.26	9.26	9.19	9.23	9.39	9.60	9.71	9.81	9.85
Net outlays	3.55	4.71	7.09	7.07	7.04	7.10	7.24	7.37	7.45	7.51	7.53
Budget authority	4.45	4.53	7.09	7.09	7.03	7.07	7.19	7.35	7.43	7.50	7.53

Farm receipts and expenses

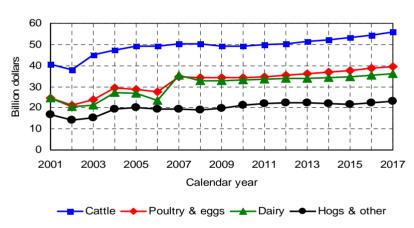
- Cash receipts from sales of program crops (grains, oilseeds, cotton, and sugar) accounted for less than half of total crop receipts from 2004-2006.
- •Program crop receipts increase sharply in 2007 and 2008 because of higher grain and oilseed prices.
- Other crop receipts vary less from year to year and grow at an annual rate of about two percent.
- •Higher prices resulted in increased cash receipts for dairy, poultry and egg producers in 2007.
- •Cattle and hog receipts, in contrast, only increased marginally in 2007.
- •Lower projected prices could result in lower cash receipts for dairy and hog producers in 2008.

- •Farm production expenses increased sharply between 2002 and 2007, and another big increase is expected in 2008.
- •Feed costs jump by almost \$15 billion between 2006 and 2008 because of higher prices for corn and other feeds.
- •Higher energy prices have contributed to increases in fuel and fertilizer costs.
- •Rental payments to non-operator landlords increase with crop returns.

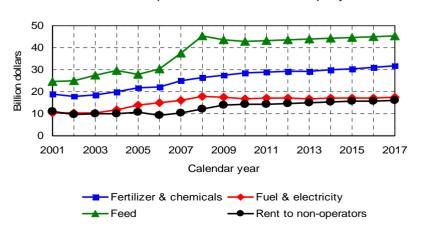
Program crop receipts jump



Dairy and poultry receipts increased in 2007



Production expenses have increased rapidly



Farm cash receipts

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
					(Bi	llion dollars	s)				
Feed grains (includes hay)	41.22	52.38	52.02	53.10	54.35	55.77	57.04	58.65	60.27	61.45	62.49
Food grains	12.20	13.67	12.43	12.31	12.61	12.87	13.15	13.42	13.68	13.84	14.05
Oilseeds	22.57	30.23	31.05	30.76	31.14	31.61	31.93	32.28	32.84	33.36	33.79
Cotton	5.92	6.21	6.35	6.63	6.60	6.54	6.47	6.45	6.46	6.47	6.46
Sugar	2.03	2.01	2.08	2.15	2.16	2.17	2.19	2.21	2.24	2.26	2.28
Other crops	58.65	59.83	60.94	62.09	63.26	64.41	65.54	66.68	67.84	69.00	70.18
Cattle	50.34	50.35	49.15	49.36	49.85	50.44	51.44	52.14	53.25	54.50	55.89
Hogs	14.48	14.02	15.06	16.45	17.26	17.75	17.75	17.31	17.17	17.84	18.45
Dairy products	35.22	32.79	32.79	33.13	33.49	33.78	33.88	34.24	34.64	35.30	36.00
Poultry, eggs	34.55	34.37	34.23	34.30	34.70	35.56	36.19	36.91	37.81	38.62	39.41
Other livestock	4.99	4.88	4.82	4.81	4.78	4.75	4.70	4.65	4.62	4.60	4.59
Total cash receipts	282.18	300.74	300.92	305.08	310.20	315.65	320.29	324.96	330.80	337.23	343.57

$Farm\ production\ expenses$

Calendar Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
					(Bi	llion dollars	s)				
Feed	37.41	45.21	43.60	42.91	43.05	43.57	43.92	44.32	44.81	45.13	45.35
Purchased livestock	18.61	17.51	16.75	16.57	16.61	16.61	17.13	17.49	18.02	18.60	19.26
Seed	12.56	13.20	13.77	14.02	14.24	14.50	14.68	14.95	15.26	15.60	15.91
Fertilizer and chemicals	24.98	26.57	27.40	28.63	28.79	29.28	29.31	29.87	30.50	31.24	31.85
Fuels and electricity	16.13	18.03	17.60	16.95	16.99	17.01	16.89	16.97	17.11	17.23	17.38
Interest	15.65	15.92	17.36	19.22	20.16	20.99	21.70	22.45	23.21	23.83	24.43
Contract and hired labor	25.98	26.93	27.72	28.44	29.14	29.94	30.76	31.54	32.34	33.14	33.95
Capital consumption	26.16	26.58	27.33	28.03	28.65	29.28	29.92	30.60	31.34	32.12	32.94
Rent to non-operators	10.20	12.11	13.83	14.14	14.38	14.69	15.03	15.35	15.56	15.78	16.12
All other	66.53	69.91	71.44	72.64	74.05	75.74	77.20	78.89	80.65	82.59	84.51
Total production expenses	254.21	271.98	276.79	281.56	286.07	291.59	296.52	302.43	308.80	315.26	321.71

Farm income

•Higher grain and oilseed prices account for most of the large increase in crop cash receipts in 2007 and 2008.

- Livestock receipts increased in 2007, primarily because of higher prices for milk and poultry.
- •Crop receipts exceed livestock receipts by an average of \$32 billion per year over 2008-2017.

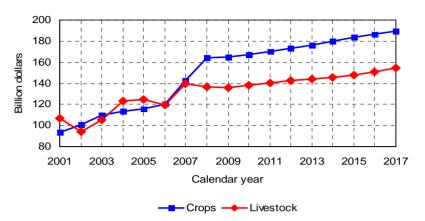
•Farm cash and total production expenses generally grow at a similar pace. Depreciation is the main difference between the two measures.

- •Cash expenses increase by \$73 billion between 2002 and 2008. Increases in expenses slow dramatically after 2008.
- Projected nominal net cash income reaches a record \$91 billion in 2008.

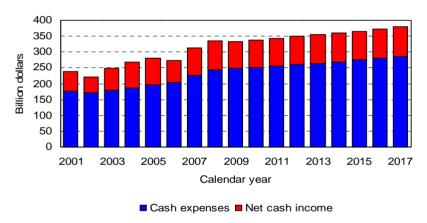
Nominal net farm income rebounded in 2007 because of the sharp increase in crop receipts.

- •A further modest increase to a record \$89 billion is projected for 2008.
- •Average net farm income remains near current levels over the next ten years.
- •Correcting for inflation, real net farm income declines after 2008, but remains above the 2006 level.

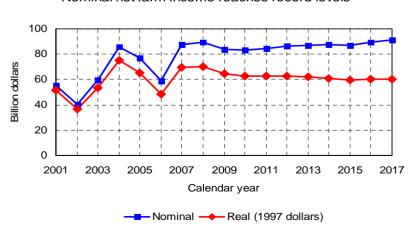
Crop receipts outpace livestock



Income growth slightly outpaces expenses in 2008



Nominal net farm income reaches record levels



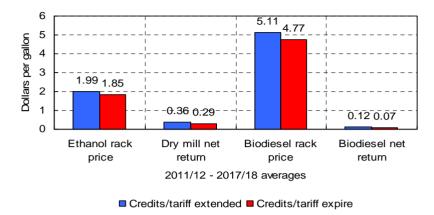
Farm income statistics

Calendar year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
					(Bi	llion dollars	s)				_
1. Farm receipts	300.00	321.50	322.73	327.11	332.60	338.62	343.82	348.96	355.43	362.39	369.27
Crops	142.59	164.33	164.87	167.04	170.13	173.37	176.33	179.70	183.32	186.38	189.24
Livestock	139.59	136.41	136.05	138.04	140.07	142.28	143.96	145.25	147.48	150.85	154.34
Farm-related	17.82	20.76	21.81	22.03	22.40	22.97	23.53	24.01	24.63	25.16	25.69
2. Government payments	12.10	13.47	10.16	10.11	10.28	10.50	10.71	10.81	9.89	10.74	11.66
3. Gross cash income (1 + 2)	312.10	334.98	332.89	337.22	342.88	349.11	354.53	359.77	365.32	373.14	380.93
4. Nonmoney income	23.85	25.33	26.58	27.46	28.11	28.80	29.49	30.22	30.92	31.72	32.58
5. Value of inventory change	5.79	1.02	1.09	0.24	-0.27	0.24	-0.27	-0.14	-0.25	-0.08	-0.33
6. Gross farm income (3 + 4 + 5)	341.75	361.33	360.57	364.93	370.71	378.15	383.75	389.85	395.99	404.77	413.18
7. Cash expenses	226.44	243.54	247.41	251.32	255.09	259.85	264.01	269.10	274.60	280.14	285.60
8. Total expenses	254.21	271.98	276.79	281.56	286.07	291.59	296.52	302.43	308.80	315.26	321.71
9. Net cash income (3 - 7)	85.67	91.44	85.48	85.90	87.78	89.26	90.52	90.67	90.72	93.00	95.33
10. Realized net farm income (3 + 4 - 8)	81.74	88.33	82.68	83.13	84.91	86.32	87.50	87.56	87.44	89.59	91.81
11. Net farm income (6 - 8)	87.53	89.35	83.77	83.37	84.64	86.56	87.22	87.42	87.19	89.50	91.47
Real (1997 dollars)	69.80	70.00	64.54	63.01	62.70	62.86	62.17	61.14	59.82	60.25	60.45

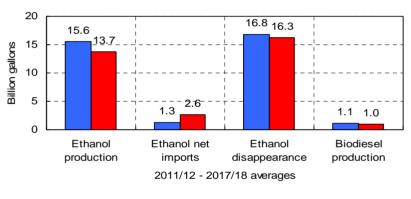
Biofuel tariff and tax provisions

- •The ethanol tariff and biodiesel tax credit are scheduled to expire at the end of 2008. The ethanol tax credit is set to expire at the end of 2010.
- •Allowing these credits and tariffs to expire reduces producer prices by \$0.14 per gallon for ethanol and \$0.34 per gallon for biodiesel
- Effects are limited by EISA mandated use levels. Returns decline less than biofuel prices because of feedstock price adjustments.
- •If the tax credit is not extended, ethanol producer margins are reduced and production declines by 12 percent.
- Effects would be larger were it not for EISA mandates that require minimum biofuel use levels.
- This is especially true for biodiesel. Returns would be negative without EISA mandates.
- Without the ethanol tariff, imports double.
- •If the ethanol tax credit expires as scheduled in 2010, average corn prices fall by an average of \$0.14 per bushel.
- Lower prices for corn and fewer competing coproducts result in more corn feed use. Exports increase and production declines.
- Soybean oil prices decline if the biodiesel tax credit is not extended. Soybean meal prices increase.

Biofuel producer prices decline without credits, tariffs

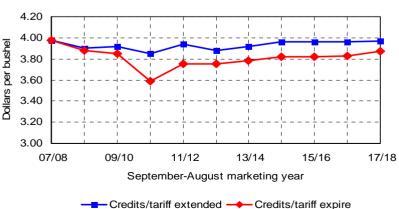


Biofuel production declines without credits, tariffs



■ Credits/tariff extended ■ Credits/tariff expire

Corn prices also decline



Biofuel tax credit and tariff effects: 2011-2017 averages

Tax and tariff provisions	extended indefinitely	expire as scheduled	Absolute	Percentage
Fax and tariff provisions	indefinitely	cobodulod		3
Γax and tariff provisions		Scrieduled	difference	difference
	(1	Dollars per gallon)		
Ethanol tax credit	0.51	0.00	-0.51	-100.0%
Biodiesel tax credit (pre-consumer oils)	1.00	0.00	-1.00	-100.0%
Ethanol specific tariff	0.54	0.00	-0.54	-100.0%
Biofuel sector results		(Billion gallons)		
Ethanol production	15.60	13.74	-1.86	-11.9%
Ethanol net imports	1.28	2.57	1.29	100.9%
Ethanol domestic disappearance	16.83	16.27	-0.56	-3.3%
Biodiesel production	1.11	1.01	-0.10	-8.6%
·	(1	Dollars per gallon)		
Ethanol price, conventional rack, Omaha	1.99	1.85	-0.15	-7.4%
Ethanol effective retail price	1.89	1.92	0.03	1.5%
Dry mill returns over operating costs	0.36	0.29	-0.07	-20.0%
Biodiesel rack price	5.11	4.77	-0.35	-6.8%
Biodiesel returns over operating costs	0.12	0.07	-0.05	-39.3%
Corn sector supply and use		(Billion bushels)		
Corn production	14.60	14.31	-0.29	-2.0%
Corn ethanol use	5.08	4.49	-0.59	-11.6%
Corn feed use	5.41	5.57	0.16	2.9%
Corn exports	2.68	2.83	0.15	5.6%
Soybean sector supply and use		(Billion bushels)		
Soybean production	3.14	3.16	0.02	0.5%
Soybean crush	2.13	2.13	0.00	0.0%
Soybean exports	0.83	0.85	0.01	1.6%
, .		(Billion pounds)		
Soyoil biodiesel use	7.52	6.80	-0.71	-9.5%
Soyoil other domestic use	15.80	16.12	0.32	2.0%
Soyoil exports	1.08	1.47	0.38	35.4%
Crop planted acreage		(Million acres)		
Corn	95.31	93.38	-1.92	-2.0%
Soybeans	70.57	70.92	0.35	0.5%
Wheat	56.99	57.20	0.20	0.4%
9 other crops plus hay	94.20	94.27	0.07	0.1%
Conservation reserve area	29.80	30.31	0.51	1.7%
12 crops + hay + CRP	346.86	346.08	-0.79	-0.2%
Crop sector prices	(1)	Dollars per bushel)		
Corn farm price	3.94	3.80	-0.14	-3.6%
Soybean farm price	10.25	9.98	-0.27	-2.6%
Wheat farm price	5.46	5.35	-0.11	-2.0%
	(Cents per pound)		
Upland cotton farm price	62.09	61.92	-0.17	-0.3%
Soybean oil market price, Decatur	57.94	54.08	-3.86	-6.7%
		(Dollars per ton)		
Soymeal price, 48% protein	222.41	228.28	5.87	2.6%
Distillers grain price, Indiana	134.11	142.98	8.88	6.6%

Biofuel tariff and tax provisions

•If biofuel tax credits and tariffs are not extended, crop cash receipts decline by an average of \$3.9 billion.

- Lower feed costs result in slightly lower livestock prices and receipts.
- Production expenses fall \$2.4 billion because of reduced corn production, feed costs, and rental payments.
- •Net farm income declines by an average of \$2.0 billion.

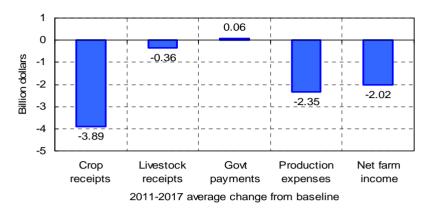
•Without biofuel credits or tariffs, grain and oilseed prices are reduced, but usually remain above levels that would trigger marketing loans or CCPs.

- •Thus the impacts on CCC farm program outlays are very small.
- •Baseline blenders credits average \$9.6 billion per year.
- Tariff revenue would be reduced if the \$0.54 specific tariff on ethanol were eliminated.

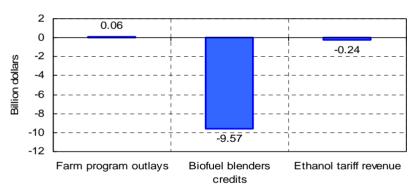
•If the tax credits expire, lower prices for grain, vegetable oil and other products reduce consumer food expenditures by an average of \$1.4 billion.

- •Without biofuel tax credits, part of the cost of the biofuel use mandates that is currently paid by taxpayers could, instead, be paid by fuel consumers.
- •The fuel consumer cost of the biofuel use mandates increases by an average of \$5.2 billion.

Farm income declines without credits, tariffs

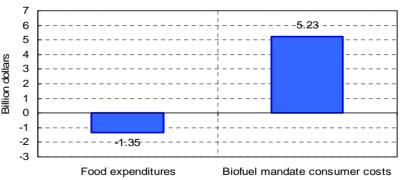


Eliminating credits, tariffs has fiscal consequences



2011-2017 average change from baseline

It also has implications for consumers



2011-2017 average change from baseline

Biofuel tax credit and tariff effects: 2011-2017 averages

	Credits, tariffs	Credits, tariffs		
	extended	expire as	Absolute	Percentage
	indefinitely	scheduled	difference	difference
Tax and tariff provisions	1)	Dollars per gallon)		
Ethanol tax credit	0.51	0.00	-0.51	-100.0%
Biodiesel tax credit (pre-consumer oils)	1.00	0.00	-1.00	-100.0%
Ethanol specific tariff	0.54	0.00	-0.54	-100.0%
Meat and milk production		(Billion pounds)		
Beef production	28.36	28.36	0.00	0.0%
Pork production	23.93	24.04	0.11	0.4%
Broiler production	39.20	39.20	0.00	0.0%
Milk production	206.44	206.58	0.14	0.1%
Livestock and dairy prices	(Dolla	ırs per hundredweigh	nt)	
Steers, Nebraska direct	92.39	92.17	-0.22	-0.2%
Barrows & gilts, 51-52% lean	52.95	52.51	-0.44	-0.8%
Broilers, 12-city wholesale	76.85	76.75	-0.10	-0.1%
All milk	16.87	16.84	-0.03	-0.2%
Farm income		(Billion dollars)		
Crop receipts	179.78	175.89	-3.89	-2.2%
Livestock receipts	146.32	145.96	-0.36	-0.2%
Government payments	10.66	10.72	0.06	0.6%
Rent to non-operator landlords	15.27	14.38	-0.90	-5.9%
Other production expenses	287.93	286.47	-1.45	-0.5%
Total production expenses	303.20	300.85	-2.35	-0.8%
Other net farm income	54.16	53.92	-0.24	-0.4%
Net farm income	87.72	85.64	-2.07	-2.4%
	((Dollars per acre)		
Value of farm real estate	3,001	2,940	-60.85	-2.0%
Farm program outlays		(Billion dollars)		
Marketing loans (crop year basis)	0.30	0.31	0.01	3.7%
Countercyclical payments (crop year)	0.50	0.51	0.02	3.2%
Net CCC outlays (fiscal year basis)	9.92	9.98	0.06	0.6%
Biofuel fiscal, consumer effects		(Billion dollars)		
Biofuel blenders credits	9.69	0.00	-9.69	-100.0%
Biofuel tariff revenue	0.35	0.11	-0.24	-68.0%
Biofuel mandate cost to consumers*	4.78	10.01	5.23	109.6%
		/=····		
		(Billion dollars)		

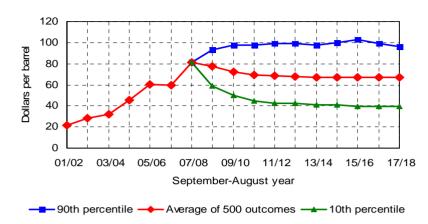
^{*}This cost equals the blender cost of buying the quantities mandated by EISA minus the amount consumers would voluntarily pay to consume that quantity. We assume this cost is passed on to all motor fuel consumers.

Ranges from the 500 alternative futures

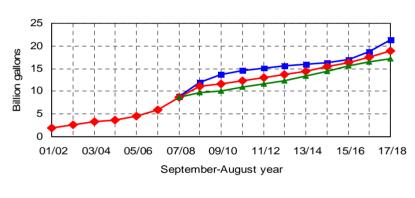
•Global Insight expects the refiners' acquisition price for petroleum to decline to less than \$70 per barrel.

- •To examine alternative futures for biofuel and agricultural markets, we explored a range of possible oil prices, approximately centered on the Global Insight forecast.
- •This variable, and hundreds of others, are varied to generate the stochastic baseline.
- •Future growth in ethanol production depends on petroleum prices, corn prices, biofuel mandates, tax credits and a wide range of other factors.
- EISA mandates effectively put a floor under ethanol use and production, but production can be greater under favorable circumstances.
- •Note that ranges are wide in the early years when production usually exceeds the mandate, but narrow around 2015 when mandates are likely to bind.
- Corn prices depend not just on ethanol demand, but also on crop yields, the value of the dollar, foreign income growth and many other uncertain factors.
- Average prices for most grains and oilseeds are relatively high. In only a few outcomes do corn prices drop below \$3.00 per bushel.
- •Caution is warranted in interpreting these and other results. There are certain to be risks to the baseline not captured in these 500 alternative futures.

Petroleum price uncertainty is great

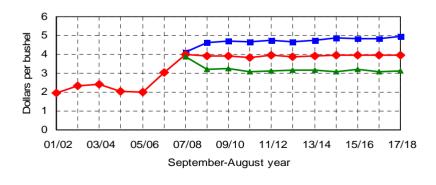


Ethanol production is therefore also uncertain



→ 90th percentile → Average of 500 outcomes → 10th percentile

Corn prices depend on ethanol, yields and more



→ 90th percentile → Average of 500 outcomes → 10th percentile