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# U.S. CROPS

## **U.S. Wheat**

Poor wheat crops in Europe, Australia, and in other exporting countries contributed to a large increase in U.S. wheat exports in 2007/08.

Increased area and record yields resulted in sharply higher U.S. wheat production in 2008/09.

Reduced supplies in competing exporting countries led to high U.S. wheat exports and prices in 2007/08. Much larger crops of major competitors limit U.S. wheat exports in 2008/09. Future growth in exports is modest.

An increase in domestic and foreign supplies and weaker U.S. export demand allow stocks to rebuild in 2008/09.

Reduced area and more normal yields result in lower wheat production in 2009/10. Average wheat stocks remain near the elevated 2008/09 levels over the baseline.

Domestic wheat use jumps in 2008/09 because of a rebound in wheat feed use. Wheat feed use is very sensitive to relative prices of feed-quality wheat and corn.

The sharp increase in wheat prices dramatically increases producer returns in 2007/08. Continued high prices and record yields result in even greater wheat market receipts in 2008/09, but sharply higher production expenses limit the increase in net returns. Lower prices and more normal yields result in a significant decline in average producer net returns in 2009/10.



## **U.S. Rice**

In spite of record world prices, U.S. rice exports decline in 2008/09, as reduced beginning stocks and imports limit available supplies. A projected increase in 2009 rice production allows stocks to rebuild and exports to increase slightly.

Domestic rice use increases over the baseline, primarily because of population growth.

International rice prices reached record levels in 2008 in response to tight global grain supplies and policies that limited exports from several major producing countries. Increased world rice production has resulted in lower prices in subsequent months and may result in 2009/10 prices that are far below the 2008 peak.

Higher rice prices result in a third straight year of sharp increases in rice market receipts per acre in 2008/09. While variable production expenses also rose sharply, net returns over operating costs increase in 2008/09. Lower prices reduce market receipts and net returns in 2009/10. Projected average rice prices increase moderately after 2010/11 but remain below the 2008/09 level.

At projected prices, only the fixed direct payment program makes significant payments to rice producers.

## U.S. Rice Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
<b>Area</b>	(Million Acres)										
Planted Area	3.00	3.15	3.00	2.74	2.76	2.84	2.90	2.99	3.02	2.98	2.94
Harvested Area	2.98	3.13	2.99	2.72	2.74	2.82	2.88	2.97	3.00	2.96	2.93
<b>Yield</b>	(Pounds per Acre)										
	6,846	7,084	7,151	7,220	7,279	7,335	7,391	7,449	7,508	7,570	7,634
<b>Supply</b>	(Million Hundredweight)										
Beginning Stocks	29.4	23.2	29.4	31.4	30.4	30.2	30.9	31.8	32.9	34.1	34.6
Production	203.7	222.0	213.6	196.6	199.7	207.2	213.1	221.4	225.4	224.0	223.5
Imports	18.2	20.1	20.3	20.9	21.1	21.4	21.7	22.0	22.3	22.7	23.1
<b>Domestic Use</b>	127.2	133.1	135.5	136.8	137.8	138.8	140.2	141.5	143.2	144.9	146.6
<b>Exports</b>	101.0	102.8	96.5	81.6	83.2	89.1	93.7	100.8	103.3	101.2	99.5
<b>Total Use</b>	228.2	236.0	232.0	218.4	221.0	227.9	233.9	242.3	246.5	246.1	246.1
<b>Ending Stocks</b>	23.2	29.4	31.4	30.4	30.2	30.9	31.8	32.9	34.1	34.6	35.1
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	23.2	29.4	31.4	30.4	30.2	30.9	31.8	32.9	34.1	34.6	35.1
<b>Prices, Program Provisions</b>	(U.S. Dollars per Hundredweight)										
Farm Price	16.93	12.80	11.87	12.05	12.53	13.02	13.27	13.68	13.64	13.61	13.60
Adjusted World Price	14.16	10.41	9.43	9.29	9.94	10.72	11.13	11.78	11.85	11.73	11.63
Loan Rate	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Target Price	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
Direct Payment Rate	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
<b>Base Area</b>	(Million Acres)										
	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48	4.48
<b>Direct Payment Yield</b>	(Pounds per Acre)										
	4,820	4,820	4,820	4,820	4,820	4,820	4,820	4,820	4,820	4,820	4,820
<b>CCP Yield</b>	(Pounds per Acre)										
	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128	5,128
<b>ACRE Participation Rate</b>	(Percent)										
	n.a.	20.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
<b>Returns and Payments</b>	(U.S. Dollars per Acre)										
Gross Market Revenue	1,158.98	906.95	848.94	869.91	911.98	954.94	980.50	1,018.96	1,024.31	1,030.43	1,038.59
Variable Expenses	514.21	467.14	456.67	478.55	496.55	512.68	519.47	516.51	520.17	526.07	532.32
Market Net Returns	644.76	439.80	392.27	391.35	415.43	442.26	461.02	502.45	504.14	504.36	506.26
Marketing Loan Benefits	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ACRE Payments	n.a.	3.16	15.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CCP Payment/Base	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	96.27	90.57	89.63	89.63	91.46	91.46	91.46	91.46	91.46	91.46	91.46

Note: Figures in this table are in rough (paddy) basis.

## U.S. Long-Grain Rice Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
<b>Area</b>	(Million Acres)										
Planted Area	2.37	2.42	2.28	2.06	2.09	2.17	2.24	2.32	2.36	2.32	2.30
Arkansas	1.30	1.33	1.26	1.15	1.16	1.20	1.24	1.28	1.30	1.28	1.27
California	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Louisiana	0.46	0.47	0.43	0.39	0.40	0.41	0.42	0.44	0.44	0.44	0.43
Mississippi	0.23	0.24	0.22	0.20	0.20	0.21	0.22	0.22	0.23	0.22	0.22
Missouri	0.20	0.20	0.20	0.17	0.17	0.18	0.18	0.19	0.20	0.19	0.19
Texas	0.17	0.18	0.16	0.14	0.14	0.15	0.16	0.18	0.18	0.18	0.17
Harvested Area	2.35	2.41	2.27	2.05	2.08	2.16	2.22	2.31	2.34	2.31	2.28
<b>Yield</b>	(Pounds per Acre)										
	6,522	6,828	6,897	6,963	7,028	7,095	7,162	7,229	7,295	7,360	7,426
<b>Supply</b>	(Million Hundredweight)										
Beginning Stocks	187.36	195.21	192.30	180.00	182.08	188.93	195.49	203.86	208.89	209.03	208.94
Production	19.03	15.51	20.31	21.53	20.35	20.05	20.33	20.96	21.73	22.41	22.65
Imports	153.26	164.48	156.67	142.81	145.99	153.06	159.19	166.80	170.91	170.10	169.52
Domestic Use	15.07	15.22	15.31	15.65	15.75	15.81	15.97	16.09	16.26	16.51	16.77
Exports	95.38	98.88	99.24	99.14	99.41	99.20	99.89	100.33	100.89	101.87	102.89
Residual	76.47	76.02	71.52	60.51	62.62	69.40	74.64	81.80	85.59	84.51	83.28
Ending Stocks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Prices</b>	(U.S. Dollars per Hundredweight)										
Farm Price	15.51	20.31	21.53	20.35	20.05	20.33	20.96	21.73	22.41	22.65	22.77
Milled Rice, Gulf	15.19	10.98	10.26	10.62	11.23	12.02	12.39	12.96	13.10	13.13	13.16
	28.94	21.73	21.25	22.44	23.78	25.26	25.78	26.70	26.94	26.99	27.04

**U.S. Medium- and Short-Grain Rice Supply and Utilization**

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
<b>Area</b>	(Million Acres)										
Planted Area	0.63	0.73	0.72	0.68	0.67	0.67	0.66	0.67	0.66	0.65	0.65
Arkansas	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10
California	0.51	0.60	0.58	0.54	0.54	0.54	0.54	0.54	0.54	0.53	0.53
Louisiana	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
Mississippi	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Missouri	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Texas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Harvested Area	0.63	0.73	0.72	0.67	0.67	0.67	0.66	0.66	0.66	0.65	0.64
<b>Yield</b>	(Pounds per Acre)										
	8,063	7,931	7,959	8,008	8,060	8,109	8,164	8,214	8,265	8,320	8,372
<b>Supply</b>	(Million Hundredweight)										
Beginning Stocks	62.69	68.81	69.72	67.51	67.83	68.51	68.89	69.99	70.35	70.39	70.92
Production	9.08	6.38	7.72	8.49	8.73	8.84	9.22	9.50	9.83	10.33	10.65
Imports	50.48	57.57	56.97	53.80	53.72	54.11	53.96	54.62	54.49	53.89	53.95
Exports	3.14	4.87	5.03	5.21	5.38	5.56	5.71	5.87	6.03	6.17	6.31
<b>Domestic Use</b>	31.80	34.27	36.29	37.65	38.38	39.62	40.35	41.15	42.28	43.03	43.73
<b>Exports</b>	24.52	26.82	24.94	21.13	20.61	19.66	19.03	19.01	17.74	16.71	16.23
<b>Residual</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Ending Stocks</b>	6.38	7.72	8.49	8.73	8.84	9.22	9.50	9.83	10.33	10.65	10.96
<b>Prices</b>	(U.S. Dollars per Hundredweight)										
Farm Price	22.22	18.00	16.31	15.83	16.07	15.84	15.85	15.88	15.34	15.14	15.00
Milled Rice, California	48.52	39.99	36.57	35.59	36.07	35.61	35.62	35.70	34.59	34.19	33.91

## **U.S. Corn**

Corn exports and feed use both decline in 2008/09, and the pace of growth in ethanol use of corn slows. However, ethanol use of corn continues to grow in response to EISA biofuel use mandates. Starting in 2015/16, more corn is used in ethanol production than is fed directly to livestock.

Reported feed and residual use of corn declines sharply in 2008/09 because of reduced animal numbers, lower corn production, and increased use of corn coproducts in feed rations. Stagnant livestock production and competition from corn coproducts limit corn feed use for the next several years.

Higher corn prices have resulted in a large increase in producer market receipts since 2005/06. Corn production expenses increased sharply in 2008/09, reducing the profitability of corn production. Variable expenses exclude land and other fixed costs.

ACRE and other farm program payments could be large in particular circumstances, but on average the payments are small relative to corn market receipts.

Export demand for corn in 2007/08 was surprisingly strong. The current macroeconomic weakness has significantly trimmed foreign demand and exports in 2008/09.



## **U.S. Ethanol and Biofuel Policy Provisions**

Projected growth in corn-based ethanol production slows, but production still reaches 15 billion gallons by 2016/17.

Imported sugar-based ethanol is assumed to satisfy most of the Renewable Fuels Standard for advanced biofuels not met by cellulosic ethanol or bio-based diesel. Future levels of cellulosic ethanol production are very uncertain. Projected supplies are below the levels envisioned in the EISA.

The average rack (wholesale) price of ethanol fell below the average rack price of gasoline for the first time in 2007/08. When use mandates are binding, renewable identification numbers (RINs) increase in value and allow the producer price of ethanol to increase relative to gasoline. Projected rack (wholesale) prices of ethanol strengthen relative to gasoline in 2008/09 and 2009/10, with lower petroleum prices and a binding mandate under the EISA. In later years, unleaded gasoline rack prices increase as petroleum prices rise.

Additive uses of ethanol increased sharply when methyl tertiary butyl ether (MTBE) was replaced in the nation's fuel supply. Voluntary use of 10% ethanol blends and E85 must absorb increasing supplies unless other blends enter the market. Ethanol blends must be price competitive with regular gasoline at the retail level to encourage the required increase in use.



## **U.S. Corn Products**

Domestic use of HFCS has declined since 2005/06. Projected use recovers in 2009/10 but is flat in later years, as per capita use resumes its slow decline.

Projected U.S. exports of HFCS grow to 969,000 tons by 2018/19 but will be dependent on the degree to which Mexico replaces sugar with HFCS in soft drinks.

Relative to sugar prices, HFCS wholesale prices have risen sharply since 2005/06, discouraging growth in HFCS use.

Increasing dry mill ethanol production results in large additional supplies of distillers grains. Most of the coproduct is fed to U.S. livestock, primarily beef and dairy cattle. The table reports the sum of wet and dried distillers grains and brewers grains on a dry-equivalent basis.

Exports of distillers grains have increased rapidly but remain modest relative to total supplies and relative to corn exports.

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.

After falling sharply in 2008/09, corn oil prices increase in response to strong global demand for vegetable oils. Rising corn oil prices benefit wet millers and may encourage new processes to extract corn oil in dry mill plants.

## U.S. Corn Products Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
<b>High-Fructose Corn Syrup</b>											
	(Thousand Tons, Oct.-Sept. Year)										
Production	8,737	9,080	9,252	9,248	9,279	9,271	9,279	9,300	9,389	9,485	9,572
Domestic Use	8,224	8,520	8,578	8,546	8,548	8,515	8,497	8,482	8,521	8,566	8,603
Net Exports	513	560	675	703	731	756	782	818	868	919	969
	(Pounds per Capita, Oct.-Sept. Year)										
Domestic Use per Capita	53.34	54.72	54.57	53.85	53.34	52.63	52.01	51.43	51.18	50.96	50.70
	(Cents per Pound, Oct.-Sept. Year)										
Price, 42% Midwest	24.28	24.29	23.29	23.50	23.84	24.38	24.82	25.05	24.77	24.62	24.53
HFCS price/refined sugar price	87.4%	81.3%	81.1%	82.5%	83.1%	84.4%	85.4%	86.5%	86.6%	86.5%	86.6%
<b>Distillers, Brewers Grains</b>											
	(Thousand Tons, Sept.-Aug. Year)										
Production (Dry Equivalent)	27,688	31,528	33,496	35,956	36,658	38,299	39,877	41,325	41,444	41,273	41,096
Domestic Use	22,862	26,364	28,089	30,310	30,781	32,205	33,560	34,809	34,746	34,394	34,031
Net Exports	4,827	5,164	5,407	5,646	5,877	6,095	6,317	6,516	6,698	6,879	7,065
	(Dollars per Ton, Sept.-Aug. Year)										
Price, Lawrenceburg, IN	135.51	125.12	122.74	125.55	126.98	131.05	133.43	134.98	135.15	135.67	135.64
DDGS Price/Corn Price	97.1%	94.4%	93.1%	91.3%	91.6%	91.2%	91.2%	91.3%	92.1%	92.7%	93.1%
<b>Corn Gluten Feed</b>											
	(Thousand Tons, Sept.-Aug. Year)										
Production	7,868	8,173	8,405	8,529	8,567	8,639	8,722	8,806	8,832	8,851	8,873
Domestic Use	6,299	6,565	6,798	6,952	7,015	7,121	7,227	7,332	7,379	7,421	7,463
Net Exports	1,569	1,607	1,606	1,577	1,552	1,519	1,495	1,474	1,453	1,430	1,410
	(Dollars per Ton, Sept.-Aug. Year)										
Price, 21%, IL Points	103.40	95.18	92.79	94.94	95.67	98.63	100.13	100.93	100.43	100.35	99.91
CGF price/corn price	74.1%	71.8%	70.4%	69.1%	69.0%	68.6%	68.5%	68.3%	68.5%	68.5%	68.6%
<b>Corn Gluten Meal</b>											
	(Thousand Tons, Sept.-Aug. Year)										
Production	2,071	2,151	2,212	2,244	2,254	2,274	2,295	2,317	2,324	2,329	2,335
Domestic Use	908	964	1,010	1,030	1,030	1,039	1,051	1,062	1,058	1,053	1,048
Net Exports	1,162	1,187	1,202	1,215	1,224	1,234	1,245	1,255	1,266	1,277	1,287
	(Dollars per Ton, Sept.-Aug. Year)										
Price, 60%, IL Points	461.74	423.96	409.53	404.69	406.91	412.11	417.72	420.73	419.82	418.84	418.25
CGM price/soy meal price	155.3%	158.9%	160.2%	160.7%	160.4%	159.6%	158.8%	158.3%	158.5%	158.6%	158.7%
<b>Corn Oil</b>											
	(Million Pounds, Oct.-Sept. Year)										
Production	2,526	2,660	2,755	2,825	2,859	2,912	2,970	3,028	3,056	3,080	3,104
Domestic Use	1,706	1,835	1,945	2,023	2,053	2,105	2,158	2,214	2,244	2,267	2,290
Net Exports	819	821	815	809	808	809	811	812	813	814	815
Ending Stocks	205	208	202	195	193	192	193	195	194	193	192
	(Cents per Pound, Oct.-Sept. Year)										
Chicago Price	34.41	35.10	38.07	41.20	42.57	43.86	44.69	45.53	46.56	47.49	48.36
Corn oil price/soy oil price	97.5%	96.6%	96.1%	96.0%	96.0%	95.8%	95.6%	95.4%	95.4%	95.4%	95.4%

## **U.S. Corn Processing**

Ethanol use accounts for most of the growth in food and industrial use of corn. HFCS and other food and industrial uses of corn grow slowly over time.

Falling petroleum and corn prices have reduced the value of ethanol and distillers grains in 2008/09, resulting in lower returns over operating costs for dry mill ethanol producers in 2008/09. The narrow margins slow capacity growth, and capacity expands modestly to meet a portion of the EISA mandates.

Lower returns and other factors have driven down utilization rates in the ethanol industry. Utilization rates again increase when petroleum and ethanol prices recover and the mandates expand.

From 2009 to 2018, dry mill net returns over operating costs average about \$0.32 per gallon. Operating costs exclude capital costs; net profits would be lower.

The pattern of net returns for wet mill ethanol plants over time is very similar to that for dry mill plants. Capital costs and average returns over operating costs generally are higher for wet mill plants than for dry mill plants.

The recent decline in net returns explains the slowdown in ethanol plant capacity expansion. Actual net returns to ethanol production depend on petroleum prices, the weather, policy, and other factors that are difficult to predict. For example, high petroleum prices may raise ethanol prices and net returns, while a drought could raise corn prices and reduce ethanol net returns.

## U.S. Corn Processing

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
<b>Corn Food, Industrial Use</b>											
	(Million Bushels)										
Fuel Alcohol	3,551	4,029	4,291	4,605	4,692	4,900	5,101	5,286	5,299	5,276	5,254
HFCS	478	496	504	503	504	502	502	502	506	510	513
Glucose and Dextrose	238	243	243	243	244	244	245	245	246	247	248
Starch	257	260	263	264	266	268	270	272	275	277	280
Beverage Alcohol	135	137	138	139	140	141	142	143	144	145	147
Cereals and Other	193	196	198	199	201	202	204	205	207	209	211
Total	4,853	5,361	5,637	5,953	6,046	6,257	6,462	6,653	6,677	6,665	6,653
<b>Corn Dry Milling</b>											
Corn Dry Milled for Ethanol	3,144	3,594	3,826	4,119	4,203	4,399	4,587	4,760	4,776	4,758	4,739
(Share of Total Ethanol)	88.5%	89.2%	89.2%	89.4%	89.6%	89.8%	89.9%	90.1%	90.1%	90.2%	90.2%
(Share Fractionating)	7.7%	8.4%	8.8%	9.2%	9.8%	10.3%	10.8%	11.4%	11.9%	12.5%	13.0%
Yields per Bushel of Corn											
	(Units per Bushel)										
Ethanol (Gallons)	2.74	2.75	2.77	2.78	2.80	2.81	2.83	2.84	2.86	2.87	2.89
Distillers Grains (Pounds)	16.90	16.89	16.89	16.89	16.88	16.88	16.87	16.86	16.86	16.85	16.85
Costs and Returns											
	(Dollars per Gallon)										
Ethanol Value	1.79	1.74	1.77	1.90	1.94	2.07	2.17	2.22	2.08	2.01	1.98
Distillers Grains Value	0.42	0.38	0.37	0.38	0.38	0.39	0.40	0.40	0.40	0.40	0.40
Corn Cost	-1.43	-1.35	-1.33	-1.38	-1.39	-1.43	-1.45	-1.46	-1.44	-1.43	-1.41
Fuel and Electricity Cost	-0.25	-0.25	-0.28	-0.30	-0.31	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33
Other Operating Costs	-0.33	-0.33	-0.33	-0.33	-0.33	-0.34	-0.34	-0.35	-0.35	-0.35	-0.36
Net Operating Return	0.21	0.19	0.20	0.27	0.29	0.36	0.44	0.49	0.36	0.30	0.27
<b>Corn Wet Milling</b>											
	(Million Bushels)										
Corn Wet Milled for Ethanol	407	435	465	487	489	502	514	525	523	518	515
(Share of Total Ethanol)	11.5%	10.8%	10.8%	10.6%	10.4%	10.2%	10.1%	9.9%	9.9%	9.8%	9.8%
Other Corn Wet Milling	973	999	1,010	1,010	1,014	1,014	1,016	1,019	1,027	1,034	1,042
Total Corn Wet Milling	1,380	1,434	1,475	1,496	1,503	1,516	1,530	1,545	1,549	1,553	1,557
Yields per Bushel of Corn											
	(Units per Bushel)										
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)	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70	1.70
Costs and Returns											
	(Dollars per Gallon)										
Ethanol Value	1.79	1.74	1.77	1.90	1.94	2.07	2.17	2.22	2.08	2.01	1.98
Gluten Feed Value	0.22	0.20	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21
Gluten Meal Value	0.26	0.24	0.23	0.22	0.22	0.23	0.23	0.23	0.23	0.23	0.23
Corn Oil Value	0.22	0.22	0.24	0.26	0.27	0.27	0.28	0.28	0.29	0.29	0.30
Corn Cost	-1.45	-1.38	-1.36	-1.42	-1.43	-1.48	-1.50	-1.51	-1.49	-1.49	-1.47
Fuel and Electricity Cost	-0.19	-0.19	-0.22	-0.23	-0.24	-0.26	-0.26	-0.26	-0.26	-0.26	-0.26
Other Operating Costs	-0.52	-0.52	-0.52	-0.53	-0.53	-0.54	-0.54	-0.55	-0.55	-0.56	-0.56
Net Operating Return	0.33	0.31	0.33	0.41	0.44	0.51	0.59	0.63	0.50	0.44	0.41

## **U.S. Sorghum**

U.S. sorghum exports have increased sharply in 2007/08 in response to reduced grain production in Europe and a large U.S. sorghum crop. The recovery in EU grain production in 2008 contributes to a sharp decline in 2008/09 in U.S. sorghum exports.

Sorghum prices generally move with corn prices so that sorghum is competitive in feed rations. Sorghum feed use increases in 2008/09 when sorghum prices decline relative to corn prices, but feed use generally falls in later years as sorghum prices increase again relative to corn.

High sorghum prices and record yields have resulted in a large jump in the per acre value of sorghum production in 2007/08. Sorghum prices and yields decline in 2008/09, sharply reducing the market value of sorghum production.

Variable expenses also increased sharply in 2008/09, further reducing sorghum net returns. Lower expenses result in higher net returns in 2009/10.



## **U.S. Barley**

Strong international demand for barley and other grains has contributed to a large increase in barley prices in 2007/08, and U.S. barley exports reached their highest level since 2000/01.

After declining in 2008/09, barley used in brewing and other food and industrial applications is expected to rebound in 2009/10 and remain relatively flat over the remainder of the projection period. Population increases offset declining consumption per capita.

Limited feed barley supplies and high prices for other grains contributed to a sharp increase in feed barley prices both in absolute terms and relative to the prices of malting barley in 2007/08. Feed barley prices fall while malting barley prices rise in 2008/09.

With larger supplies, malting barley prices fall back in 2009/10, reducing barley net returns. Malting and feed barley producers may have very different experiences than suggested in these all-barley averages.



## **U.S. Oats**

Sharply reduced acreage resulted in the fifth consecutive year of declining U.S. oats production in 2008.

Rising global market demand for all grains in 2007/08 and reduced U.S. oats imports in 2008/09 contributed to two straight years of sharp increases in oats prices and market receipts.

Like many other crops, much of the increase in market receipts was offset by rising production costs for oats producers. Both receipts and expenses dip in 2009/10 but remain above pre-2008/09 levels.

Imports exceed domestic production, and this pattern is expected to persist over the next 10 years.

Strong prices draw in additional acres in 2009/10, but strength in competing crop returns puts oats acreage on a declining path throughout the baseline.



## **U.S. Hay**

Hay yields were again below the long-run trend in 2008/09, preventing the market's attempt to further build stocks. The slightly lower hay production and a rebound in disappearance result in very tight hay markets in 2008/09. Tight supplies led to record hay prices in 2008/09.

Projected modest increases in both hay area harvested and yields allow hay stocks to rebuild in 2009/10. Hay area remains fairly stable after 2009/10, so the projected increase in production is a result of slow growth in yields per acre.

As hay supplies increase relative to cattle numbers, hay prices fall in 2009/10 but remain high by historical standards.

Hay markets are more fragmented than markets for most other agricultural commodities, so trends in national average prices may not reflect local conditions.



## **U.S. Soybeans and Soybean Products**

Acreage shifts from soybeans to corn resulted in a large reduction in 2007 soybean production, but soybean acreage and production rebounded in 2008.

Ending stocks remain roughly flat at 2007/08 levels, as production and use are in close balance throughout the baseline.

With stocks relatively tight, soybean prices are likely to be volatile, as even small shocks to supply or demand would disturb the projected balance.

Limited soybean supplies and weaker domestic demand for soybean oil and soybean meal result in lower soybean crush in 2008/09. Projected crush increases after 2008/09 in response to increased domestic and world demand for vegetable oil and protein meal.

Soybean exports remain over 1.1 billion bushels per year from 2008/09 to 2018/19. Increased South American supplies are offset by increased demand from China and other importers.

Higher soybean prices dramatically increased producer returns over variable expenses in 2007/08. In 2008/09 lower soybean prices and yields reduce soybean market receipts per acre, and higher production costs further reduce net returns. Soybean returns must remain well above pre-2007 levels for soybeans to remain competitive with corn production.

In spite of sharply lower prices, domestic use of soybean oil for purposes other than biodiesel production falls in 2008/09 for the fourth straight year. Increasing amounts of soybean oil are used to produce biodiesel.

Global demand for vegetable oil weakened in 2008/09, reducing U.S. soybean oil exports and prices. Exports recover only when biodiesel use levels off after 2012/13.

Reduced livestock and poultry production contributes to lower 2008/09 domestic use of soybean meal. A resumption of moderate growth in livestock production contributes to increased soybean meal use beginning in 2009/10.

Soybean meal exports increase in the latter half of the baseline as soybean meal prices fall relative to other feeds.

Weaker global demand reduces the value of soybean oil in a bushel of soybeans in 2008/09.

The Illinois soybean processor price falls much more than the farm price in 2008/09. The farm price is weighted by monthly marketings, and this held down the 2007/08 average.

## U.S. Soybean Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
<b>Area</b>	(Million Acres)										
Planted Area	75.7	75.0	75.4	76.1	76.5	76.9	76.8	76.8	77.1	77.4	77.7
Harvested Area	74.6	74.0	74.3	75.1	75.5	75.8	75.8	75.7	76.0	76.3	76.6
<b>Yield</b>	(Bushels per Acre)										
Actual	39.6	41.8	42.1	42.5	42.9	43.2	43.6	44.0	44.4	44.9	45.2
<b>Supply</b>	(Million Bushels)										
Beginning Stocks	205	210	236	235	229	225	224	222	220	220	222
Production	2,959	3,089	3,128	3,189	3,234	3,277	3,304	3,334	3,378	3,424	3,465
Imports	9	9	9	9	9	9	9	9	9	9	9
<b>Domestic Use</b>	1,863	1,903	1,958	2,007	2,050	2,094	2,134	2,176	2,225	2,276	2,325
Crush	1,698	1,728	1,778	1,826	1,869	1,912	1,952	1,994	2,041	2,090	2,137
Seed, Residual	165	174	180	181	182	181	181	182	184	186	188
<b>Exports</b>	1,100	1,169	1,180	1,196	1,196	1,194	1,181	1,169	1,162	1,156	1,148
<b>Total Use</b>	2,963	3,072	3,138	3,204	3,246	3,288	3,315	3,345	3,387	3,432	3,473
<b>Ending Stocks</b>	210	236	235	229	225	224	222	220	220	222	223
CCC Inventory	0	0	0	0	0	0	0	0	0	0	0
Under Loan	12	17	17	16	16	15	14	14	15	15	15
Other Stocks	197	219	217	212	210	209	208	206	206	207	207
<b>Prices, Program Provisions</b>	(Dollars per Bushel)										
Farm Price	9.37	8.75	8.78	9.08	9.30	9.55	9.78	9.94	9.99	10.03	10.09
Illinois Processor Price	10.03	9.42	9.46	9.74	9.95	10.20	10.43	10.58	10.63	10.67	10.72
Loan Rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Target Price	5.80	5.80	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Direct Payment	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
<b>Base Area</b>	(Million Acres)										
Base Area	52.0	52.1	52.1	52.1	52.2	52.2	52.2	52.2	52.2	52.2	52.2
<b>Direct Payment Yield</b>	(Bushels per Acre)										
Direct Payment Yield	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8
CCP Yield	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1	34.1
<b>ACRE Participation Rate</b>	(Percent)										
ACRE Participation Rate	n.a.	70.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0	75.0
<b>Returns and Payments</b>	(U.S. Dollars per Acre)										
Gross Market Revenue	371.49	365.34	369.76	385.50	398.38	412.92	426.55	437.40	444.05	450.04	456.19
Variable Expenses	131.45	120.73	118.57	123.08	126.80	130.85	133.32	133.78	135.28	137.13	139.00
Market Net Returns	240.04	244.61	251.19	262.42	271.58	282.07	293.22	303.62	308.77	312.91	317.19
Marketing Loan Benefits	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ACRE Payments	n.a.	12.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CCP Payment/Base	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	11.52	9.71	9.60	9.60	9.79	9.79	9.79	9.79	9.79	9.79	9.79
<b>Other indicators</b>	(U.S. Dollars)										
48% Meal Price/ton	297.32	266.83	255.57	251.88	253.73	258.21	263.07	265.75	264.94	264.03	263.46
Oil Price/cwt	35.28	36.33	39.60	42.92	44.36	45.78	46.73	47.70	48.80	49.78	50.70
Crushing Margin/bu	1.08	1.08	1.15	1.17	1.16	1.18	1.18	1.21	1.26	1.31	1.35
<b>Bean/Corn Ratio</b>	(Index)										
Bean/Corn Ratio	2.40	2.36	2.38	2.36	2.40	2.37	2.39	2.40	2.43	2.45	2.47

## U.S. Soybean Meal Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Thousand Tons)										
<b>Supply</b>	40,787	41,514	42,689	43,836	44,859	45,903	46,850	47,843	48,954	50,113	51,234
Beginning Stocks	294	305	298	309	319	322	324	324	323	324	326
Production	40,328	41,045	42,226	43,362	44,375	45,417	46,361	47,354	48,466	49,624	50,743
Imports	165	165	165	165	165	165	165	165	165	165	165
<b>Domestic Use</b>	32,084	32,687	33,347	33,988	34,491	35,045	35,519	36,032	36,578	37,156	37,645
<b>Exports</b>	8,399	8,530	9,032	9,529	10,046	10,535	11,007	11,488	12,052	12,631	13,262
<b>Total Use</b>	40,483	41,216	42,379	43,517	44,537	45,580	46,526	47,520	48,630	49,787	50,907
<b>Ending Stocks</b>	305	298	309	319	322	324	324	323	324	326	327
	(U.S. Dollars per Ton)										
<b>Prices, 48% Protein</b>											
Decatur	297.32	266.83	255.57	251.88	253.73	258.21	263.07	265.75	264.94	264.03	263.46

## U.S. Soybean Oil Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Million Pounds)										
<b>Supply</b>	22,016	21,986	22,150	22,572	22,998	23,494	23,952	24,432	24,932	25,454	25,965
Beginning Stocks	2,483	2,107	1,700	1,574	1,511	1,503	1,504	1,505	1,468	1,430	1,400
Production	19,483	19,829	20,400	20,948	21,438	21,941	22,397	22,877	23,414	23,974	24,514
Imports	50	50	50	50	50	50	50	50	50	50	50
<b>Domestic Use</b>	18,158	18,704	19,133	19,661	19,872	19,813	19,920	20,049	20,177	20,297	20,319
Food Use	14,979	15,033	14,870	14,655	14,698	14,755	14,862	14,962	15,070	15,191	15,326
Biodiesel Use	3,180	3,670	4,262	5,006	5,175	5,057	5,057	5,087	5,106	5,106	4,993
<b>Exports</b>	1,750	1,582	1,443	1,401	1,623	2,177	2,528	2,916	3,325	3,757	4,272
<b>Total Use</b>	19,909	20,286	20,576	21,062	21,496	21,990	22,447	22,964	23,502	24,054	24,591
<b>Ending Stocks</b>	2,107	1,700	1,574	1,511	1,503	1,504	1,505	1,468	1,430	1,400	1,373
	(U.S. Cents per Pound)										
<b>Prices</b>											
Decatur	35.28	36.33	39.60	42.92	44.36	45.78	46.73	47.70	48.80	49.78	50.70

## **U.S. Biodiesel**

Biodiesel production continues to expand while capacity growth has slowed. At the same time, biodiesel feedstocks are increasingly diverse, with greater shares coming from fats and oils other than soybean oil.

The projections assume the following: the authority to waive the EISA biodiesel mandate is not utilized, a 1-billion-gallon mandate is carried forward after 2012, and soybean-oil-based biodiesel continues to satisfy greenhouse gas reductions required under the bio-based diesel mandate.

The projections further assume that the \$1.00-per-gallon tax credit continues to be available on U.S.-produced biodiesel that is blended in this country prior to export, and that the European Union does not impose additional tariffs on U.S. biodiesel imports.

As the EISA mandates increase, rising domestic use of biodiesel crowds out exportable supplies. The increase in domestic use after 2008/09 is largely driven by the EISA mandates and flattens when the mandate stops growing.

Lower petroleum prices in 2008/09 have contributed to lower biodiesel prices. The decline in biodiesel prices is offset by lower feedstock prices for fats and oils.

Excess existing production capacity keeps margins low even as biodiesel use grows with the mandate. Existing capacity is enough to meet the 1-billion-gallon mandate, and narrow margins discourage growth in biodiesel capacity.

## U.S. Biodiesel Sector

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
<b>Biodiesel Supply and Use</b>											
	(Million Gallons, Oct.-Sept. Year)										
Production	774	892	1,007	1,138	1,180	1,173	1,177	1,183	1,187	1,188	1,173
From Soybean Oil	413	477	554	650	672	657	657	661	663	663	648
From Other Fats and Oils	362	416	454	488	508	516	520	522	524	525	524
Net Exports	332	292	257	205	180	173	177	183	187	188	173
Domestic Use	442	600	750	933	1,000	1,000	1,000	1,000	1,000	1,000	1,000
<b>Fuel Prices*</b>											
	(Dollars per Gallon, Oct.-Sept. Year)										
Biodiesel Rack	3.45	3.45	3.76	4.08	4.22	4.32	4.39	4.47	4.57	4.67	4.75
#2 Diesel, Refiner Sales	1.85	1.74	2.30	2.62	2.78	2.81	2.72	2.66	2.66	2.67	2.71
#2 Diesel, Retail	2.56	2.45	3.01	3.34	3.50	3.54	3.45	3.40	3.41	3.42	3.44
Tax credit, pre-consumer	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Tax Credit, Other Feedstocks	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
<b>Costs and Returns</b>											
Biodiesel Value	3.45	3.45	3.76	4.08	4.22	4.32	4.39	4.47	4.57	4.67	4.75
Glycerin Value	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Soy Oil Cost	-2.72	-2.80	-3.05	-3.30	-3.42	-3.52	-3.60	-3.67	-3.76	-3.83	-3.90
Other Operating Costs	-0.55	-0.55	-0.56	-0.56	-0.56	-0.57	-0.58	-0.58	-0.59	-0.59	-0.60
Net Operating Return	0.24	0.15	0.21	0.27	0.28	0.27	0.26	0.26	0.27	0.29	0.30

## U.S. Vegetable Oil Consumption

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
(Pounds)											
<b>Per Capita Consumption</b>	69.08	69.08	68.16	67.27	67.00	66.82	66.83	66.83	66.76	66.74	66.74
Soy Oil (Exc. Biodiesel)	48.58	48.28	47.30	46.17	45.86	45.60	45.49	45.36	45.26	45.19	45.16
Corn Oil	5.53	5.89	6.19	6.37	6.41	6.50	6.61	6.71	6.74	6.74	6.75
Canola Oil (Exc. Biodiesel)	10.04	9.96	9.74	9.80	9.83	9.84	9.88	9.92	9.95	10.01	10.05
Cottonseed Oil	2.21	2.29	2.24	2.18	2.14	2.11	2.08	2.07	2.05	2.03	2.01
Sunflower Oil	1.86	1.86	1.88	1.92	1.93	1.93	1.93	1.93	1.93	1.93	1.93
Peanut Oil	0.85	0.81	0.82	0.83	0.83	0.83	0.83	0.84	0.84	0.84	0.85

## **U.S. Sunflower Seed and Sunflower Seed Products**

Sunflower seed prices increased sharply in 2007/08 in response to strong global demand for vegetable oil. Prices decline in 2008/09 and 2009/10, in part because of lower world vegetable oil prices.

Growth in European biodiesel production, strong food demand in China and India, and a variety of other factors keep minor oilseed prices above pre-2007 levels over the baseline.

Sunflower seed returns per acre increased sharply in 2007/08 because of higher prices and yields. Returns fall in 2008/09 and 2009/10 as prices retreat.

ACRE payments could be triggered in 2009/10 if prices fall as much or more than projected, or if state yields fall below recent averages.

As a result of high producer returns, projected sunflower seed planted area remains above 2 million acres over the next 10 years. Despite strong sunflower seed market returns, acreage does not increase more because of strong competition from other crops.

Over the baseline, continued strength in vegetable oil demand leads to rising sunflower oil prices, while sunflower meal prices generally decline over time.



## U.S. Sunflower Meal Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Thousand Tons)										
<b>Supply</b>	379	381	388	399	409	416	422	434	447	462	477
Beginning Stocks	5	5	5	5	5	5	5	5	5	5	5
Production	374	376	383	394	404	411	417	429	442	457	472
Imports	0	0	0	0	0	0	0	0	0	0	0
<b>Domestic Use</b>	359	360	368	379	388	395	402	413	427	441	456
<b>Exports</b>	15	15	15	15	15	15	15	15	15	15	15
<b>Total Use</b>	374	376	383	394	404	411	417	429	442	457	472
<b>Ending Stocks</b>	5	5	5	5	5	5	5	5	5	5	5
	(U.S. Dollars per Ton)										
<b>Price</b>											
28% Protein, Minnesota	155.43	141.71	136.65	134.98	135.82	137.83	140.02	141.22	140.86	140.45	140.20

## U.S. Sunflower Oil Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Million Pounds)										
<b>Supply</b>	761	795	796	815	834	848	861	882	906	933	960
Beginning Stocks	26	58	46	45	48	49	51	52	52	53	54
Production	659	662	675	695	711	724	735	755	779	805	831
Imports	75	75	75	75	75	75	75	75	75	75	75
<b>Domestic Use</b>	574	579	590	610	618	626	630	635	641	648	654
<b>Exports</b>	129	170	160	156	166	171	180	195	212	231	250
<b>Total Use</b>	703	749	751	767	785	797	810	830	853	879	905
<b>Ending Stocks</b>	58	46	45	48	49	51	52	52	53	54	55
	(U.S. Cents per Pound)										
<b>Price</b>											
Average Crude, Minnesota	60.31	61.44	64.43	66.31	67.63	69.03	70.31	71.39	72.56	73.51	74.45

## **U.S. Canola Seed and Canola Seed Products**

Canola prices increase sharply in 2007/08 in response to strong global demand for vegetable oil. Prices decline in 2008/09 and 2009/10, in part because of lower world vegetable oil prices.

Growth in European biodiesel production, strong food demand in China and India, and a variety of other factors keep minor oilseed prices above pre-2007 levels over the baseline.

Canola returns per acre increased sharply in 2007/08 because of higher prices and yields. Returns continue to grow in 2008/09 and beyond.

Canola returns remain well above recent average levels over the next 10 years. Higher receipts come from market returns, as price levels make producers ineligible for marketing loan benefits and countercyclical payments. For those electing to participate, ACRE payments could be triggered in 2009/10 if prices fall as much or more than projected, or if state yields fall below recent averages.

As a result of high producer returns, projected canola planted area grows modestly over the next 10 years. Despite strong canola market returns, acreage does not increase more because of strong competition from other crops.

Over the baseline, continued strength in vegetable oil demand leads to rising canola oil prices, while canola meal prices generally decline over time.

While plants have been built to use canola oil as a feedstock in biodiesel production, projected canola oil prices are sufficiently high that relatively little U.S. canola oil is likely to be used for biodiesel production.



## U.S. Canola Meal Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Thousand Tons)										
<b>Supply</b>	2,955	2,892	2,905	2,955	3,008	3,044	3,087	3,125	3,165	3,210	3,257
Beginning Stocks	6	6	6	6	6	6	6	6	6	6	6
Production	728	718	736	759	774	786	797	810	823	837	848
Imports	2,222	2,168	2,163	2,190	2,228	2,252	2,284	2,309	2,336	2,368	2,402
<b>Domestic Use</b>	2,836	2,773	2,785	2,836	2,889	2,924	2,968	3,006	3,046	3,091	3,137
<b>Exports</b>	114	114	114	114	114	114	114	114	114	114	114
<b>Total Use</b>	2,949	2,886	2,899	2,949	3,002	3,038	3,081	3,119	3,159	3,204	3,251
<b>Ending Stocks</b>	6	6	6	6	6	6	6	6	6	6	6
	(U.S. Dollars per Ton)										
<b>Market Price</b>	204.82	192.02	186.52	180.95	181.32	185.23	188.83	191.78	192.37	192.54	192.31

## U.S. Canola Oil Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Million Pounds)										
<b>Supply</b>	3,601	3,565	3,483	3,526	3,562	3,594	3,641	3,686	3,724	3,781	3,832
Beginning Stocks	134	142	115	82	67	61	60	62	62	61	62
Production	948	935	958	988	1,008	1,024	1,038	1,055	1,073	1,090	1,105
Imports	2,519	2,487	2,410	2,455	2,487	2,509	2,542	2,569	2,589	2,630	2,664
<b>Domestic Use</b>	3,172	3,163	3,114	3,172	3,214	3,247	3,292	3,337	3,376	3,432	3,481
Biodiesel Use	77	63	52	61	64	62	63	64	64	68	70
Food and Other	3,095	3,101	3,062	3,111	3,151	3,185	3,229	3,273	3,312	3,364	3,411
<b>Exports</b>	287	287	287	287	287	287	287	287	287	287	287
<b>Total Use</b>	3,459	3,450	3,400	3,459	3,501	3,534	3,579	3,623	3,663	3,719	3,768
<b>Ending Stocks</b>	142	115	82	67	61	60	62	62	61	62	64
	(U.S. Cents per Pound)										
<b>Market Price</b>	42.68	44.93	50.86	53.45	54.86	56.51	57.41	58.34	59.61	60.25	61.05

## **U.S. Peanuts and Peanut Products**

High contract prices led to a sharp increase in peanut planted area in 2008. Combined with record yields, the result is a large increase in 2008/09 peanut production and carryover stocks.

The expectation of lower prices results in a drop in projected 2009 peanut area, which leaves supply in approximate balance with demand.

Domestic food use of peanuts increased significantly after policy reforms were enacted in the 2002 farm bill but has declined in the last few years. A modest projected increase in peanut food use can be attributed to projected domestic food use of peanuts, which grows more slowly than population.

The baseline was prepared before Peanut Corporation of America products were recalled in late January 2009.

U.S. peanut exports have increased since 2004/05 and are projected to remain near current levels.

Higher peanut prices and yields increase per acre market receipts in 2008/09. Unlike most other crops, peanut prices are not high enough to eliminate countercyclical payments.

Variable production expenses increased sharply in 2008/09. Lower market prices and a return to normal yields reduce 2009/10 market receipts. Expenses also fall in 2009/10.

Peanut crush and exports can vary a great deal from year to year, but little growth is expected in either category.



**U.S. Peanut Meal Supply and Utilization**

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Million Pounds)										
<b>Supply</b>	265	240	245	246	247	246	246	250	252	254	256
Beginning Stocks	7	7	7	7	7	7	7	7	7	7	7
Production	258	233	239	239	241	239	240	244	246	248	249
Imports	0	0	0	0	0	0	0	0	0	0	0
<b>Domestic Use</b>	247	222	228	228	230	228	229	233	235	237	238
<b>Exports</b>	11	11	11	11	11	11	11	11	11	11	11
<b>Total Use</b>	258	233	239	239	241	239	240	244	246	248	249
<b>Ending Stocks</b>	7	7	7	7	7	7	7	7	7	7	7
	(U.S. Dollars per Ton)										
<b>Price</b>											
Southeast Mills, FOB	138.17	127.82	122.08	119.43	118.99	120.74	122.53	123.32	122.23	120.93	119.33

**U.S. Peanut Oil Supply and Utilization**

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Million Pounds)										
<b>Supply</b>	298	286	292	297	300	304	307	311	315	319	322
Beginning Stocks	24	24	24	24	24	24	24	24	24	24	24
Production	176	158	162	163	164	162	163	166	167	168	170
Imports	99	103	105	111	113	118	120	121	123	126	128
<b>Domestic Use</b>	263	251	257	262	265	269	272	276	279	283	287
<b>Exports</b>	11	11	11	11	11	11	11	11	11	11	11
<b>Total Use</b>	274	262	268	273	276	280	283	287	290	294	298
<b>Ending Stocks</b>	24	24	24	24	24	24	24	24	24	24	24
	(U.S. Cents per Pound)										
<b>Price</b>											
50% Southeast Mills	80.75	83.87	86.97	90.36	92.15	93.49	94.64	95.52	96.45	97.19	97.94

## **U.S. Upland Cotton and Cottonseed Products**

Upland cotton production continued its decline in 2008 under competition for area from other crops. A further decline in cotton planted area is expected in 2009, but normal weather could result in higher yields and less abandoned area than in 2008, which would result in an actual increase in production in 2009/10.

Lower production allows stocks in 2008/09 to return to more normal levels after reaching nearly 10 million bales in 2007/08.

The current economic climate has cut world cotton demand, pushing down prices and trade. When world income growth resumes, world cotton use should expand.

Domestic mill use continues to decline. U.S. upland cotton exports far exceed domestic mill use as demand becomes increasingly export dependent. Recent data suggests the 2008/09 demand decline could be even more severe than indicated here.

Changes in Chinese cotton purchasing patterns have contributed to large historic annual swings in U.S. cotton exports. Projected exports follow production, but significant annual variation can be expected.

Variable production expenses grew sharply in 2008/09. Projected expenses decline in 2009//10, but net returns over variable expenses remain narrow. Increased marketing loan benefits and countercyclical payments offset the decline in market receipts.

Higher prices for all oilseeds and reduced cottonseed production contribute to a further increase in cottonseed prices in 2008/09. Higher cottonseed prices have squeezed cottonseed crushing margins in 2008/09 relative to a year ago. Weaker oilseed meal prices contribute to a drop in cottonseed prices in 2009/10, but prices remain above 2007/08 levels throughout the baseline.



## U.S. Cottonseed Supply and Utilization

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Thousand Tons)										
<b>Supply</b>	5,122	5,159	5,084	5,031	5,033	5,007	5,041	5,137	5,215	5,306	5,392
Beginning Stocks	643	330	318	310	305	304	302	305	312	319	326
Production	4,429	4,802	4,740	4,694	4,702	4,676	4,712	4,806	4,876	4,961	5,039
Imports	50	26	26	26	26	26	26	26	26	26	26
<b>Domestic Use</b>	4,439	4,497	4,434	4,391	4,394	4,371	4,400	4,484	4,551	4,630	4,703
Crush	2,314	2,498	2,497	2,501	2,505	2,501	2,509	2,529	2,543	2,560	2,575
Other	2,125	1,999	1,937	1,890	1,889	1,870	1,892	1,956	2,008	2,070	2,128
<b>Exports</b>	353	344	339	335	335	334	335	341	345	350	355
<b>Total Use</b>	4,792	4,841	4,774	4,726	4,729	4,704	4,736	4,825	4,896	4,980	5,059
<b>Ending Stocks</b>	330	318	310	305	304	302	305	312	319	326	333
	(U.S. Dollars)										
<b>Prices and Returns</b>											
Farm Price/ton	202.76	173.93	177.28	183.29	186.75	191.46	194.70	196.76	198.10	199.07	200.03
Meal Price/ton	246.27	217.72	208.60	205.80	207.26	211.30	215.08	216.45	215.05	213.41	212.15
Oil Price/cwt	41.18	42.60	45.98	49.37	50.88	52.35	53.34	54.32	55.45	56.45	57.38
Crushing Margin/ton	42.65	62.80	66.00	69.54	71.55	73.41	75.07	76.80	78.40	79.85	81.28

**U.S. Cottonseed Meal Supply and Utilization**

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Thousand Tons)										
<b>Supply</b>	1,127	1,205	1,213	1,217	1,219	1,217	1,220	1,229	1,236	1,244	1,252
Beginning Stocks	55	49	57	59	60	60	59	58	58	59	60
Production	1,071	1,156	1,156	1,157	1,159	1,158	1,161	1,170	1,177	1,185	1,192
Imports	0	0	0	0	0	0	0	0	0	0	0
<b>Domestic Use</b>	967	1,038	1,044	1,047	1,050	1,048	1,052	1,060	1,067	1,074	1,082
<b>Exports</b>	110	110	110	110	110	110	110	110	110	110	110
<b>Total Use</b>	1,077	1,148	1,154	1,157	1,160	1,158	1,162	1,170	1,177	1,184	1,192
<b>Ending Stocks</b>	49	57	59	60	60	59	58	58	59	60	60
	(U.S. Dollars per Ton)										
<b>Prices</b>											
Memphis	246.27	217.72	208.60	205.80	207.26	211.30	215.08	216.45	215.05	213.41	212.15

**U.S. Cottonseed Oil Supply and Utilization**

	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
	(Million Pounds)										
<b>Supply</b>	885	886	887	885	883	881	882	888	892	896	901
Beginning Stocks	147	89	90	87	84	83	82	81	80	79	79
Production	739	797	797	798	799	798	801	807	812	817	822
Imports	0	0	0	0	0	0	0	0	0	0	0
<b>Domestic Use</b>	683	712	705	691	687	682	681	682	682	682	683
<b>Exports</b>	113	84	95	110	114	117	120	126	130	135	140
<b>Total Use</b>	796	796	800	801	801	799	801	808	812	818	823
<b>Ending Stocks</b>	89	90	87	84	83	82	81	80	79	79	78
	(U.S. Cents per Pound)										
<b>Prices</b>											
Valley Points	41.18	42.60	45.98	49.37	50.88	52.35	53.34	54.32	55.45	56.45	57.38

## U.S. Sugar

Sugarcane and sugar beet area both declined slightly in 2007, but rising sugarcane yields resulted in little net change in 2007 sugar production. Area declines in 2008 because of weak returns to sugar production and strong returns to competing crops.

Reduced production of beet sugar results in a sharp drawdown of sugar stocks in 2008/09. Sugar beet area rebounds in 2009, as beet returns increase relative to competing crops. The baseline does not assume the proposed reduction in Florida cane production for Everglades restoration.

The 2008 farm bill created a program to divert sugar into ethanol production if the alternative is accumulation of government stocks. In any given year, and in the context of this deterministic baseline, the most likely outcome is that no sugar will be used for ethanol production. Whenever sugar supplies are unusually large or sugar demand is unusually weak, the program may be triggered. If the program works as intended, no CCC sugar stocks should accumulate. Without this program, prices would occasionally drop low enough to result in government stock accumulation.

Sugar imports continue to put downward pressure on sugar prices in 2008/09. Future import levels are an important source of uncertainty for the U.S. sugar sector. While imports under the TRQ for sugar are fairly predictable, it is much more difficult to estimate future sugar trade with Mexico.

This baseline assumes a moderate level of U.S. sugar imports from Mexico, so total U.S. sugar imports average about 2.3 million tons per year. Separate stochastic 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. Sugar consumption flattens and a further modest reduction in per capita HFCS use is projected. Total domestic sugar deliveries increase slowly over the next 10 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 long-run outlook.

Projected average sugar prices consistently exceed the loan rate.

