

August 2013 Baseline Update for U.S. Agricultural Markets

August 2013

FAPRI-MU Report #04-13

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

Providing objective analysis for more than 25 years

www.fapri.missouri.edu
amap.missouri.edu

Published by the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri (MU), 101 Park DeVillie Drive, Suite E; Columbia, MO 65203. FAPRI–MU is part of the Division of Applied Social Sciences (DASS) in the College of Agriculture, Food and Natural Resources (CAFNR).

<http://www.fapri.missouri.edu>

This material is based upon work supported by the U.S. Department of Agriculture, under Agreement No. 58-0111-12-003.

Any opinion, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the U.S. Department of Agriculture nor the University of Missouri.

The crop and biofuel projections in this report were prepared by the team at FAPRI-MU, including Pat Westhoff (westhoff@missouri.edu), Scott Gerlt (gerlts@missouri.edu), Jarrett Whistance (jwxbb@mail.missouri.edu), and Julian Binfield (binfieldj@missouri.edu).

The livestock, poultry, dairy and consumer price projections were prepared by the MU Agricultural Markets and Policy (AMAP) team, including Scott Brown (browns@missouri.edu) and Daniel Madison (madisondc@missouri.edu).

FAPRI-MU and AMAP are both part of the Integrated Policy Group in the MU Division of Applied Social Sciences.

U.S. grain, oilseed and cotton trade figures reported here were prepared with the help of Mike Helmar (mhelmar@cabnr.unr.edu) at the University of Nevada, Reno. Eric Wailes (ewailes@uark.edu) and Ed de la Cuesta Chavez (echavez@uark.edu) provided input for the rice projections.

Permission is granted to reproduce this information with appropriate attribution to the authors and FAPRI–MU.

The University of Missouri–Columbia does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, age, disability or status as a qualified protected veteran. For more information, call Human Resource Services at 573-882-4256 or the US Department of Education, Office of Civil Right

Summary

The aftermath of the drought of 2012 continues to be felt in agricultural markets. This report provides an update of the 2013 FAPRI-MU long-term baseline to reflect information available in mid-August 2013.

The baseline update uses 2013 acreage, yield and production estimates included in USDA's August 2013 *Crop Production* report. These estimates reflect the first objective yield estimates of the year, and will be subject to revision. Final market outcomes are certain to differ from these projections, perhaps in important ways, as weather and other factors will contribute to continued market volatility.

The baseline update assumes a continuation of current agricultural and biofuel policies. Farm commodity provisions of the 2008 farm bill are extended in this baseline. In the case of the Renewable Fuel Standard (RFS), the baseline assumes that EPA uses some of the discretion it has to reduce mandates when cellulosic biofuel production falls short of targeted levels. This baseline update is not a forecast of what will happen, but it can be used as a point of reference to examine the possible impacts of proposed policy changes.

Macroeconomic assumptions underlying these projections are based on July 2013 forecasts by IHS Global Insight. The U.S. and world economies are forecast to grow at a faster pace in 2014 and 2015. Inflation remains moderate, but interest rates increase after 2015. Oil prices dip in 2014 and then increase slowly.

Given all of the assumptions of the analysis, here are a few highlights of the results:

- Prices for grains and oilseeds fall sharply from the drought-induced peaks of the 2012/13 marketing year. Increased domestic and global supplies are the main cause.
- Corn prices average \$4.65 per bushel for the crop harvested in 2013. Once stocks rebuild, prices could be even lower in subsequent years.
- Soybean prices average \$11.33 per bushel for this year's crop and could also decline further in 2014. For all crops, actual prices will be very sensitive to changing production estimates.
- Lower prices are likely to result in less corn acreage in 2014. The area devoted to soybeans, wheat, cotton and rice may increase slightly, while the total area planted to 13 major crops is projected to decline by about 1 percent.
- Ethanol production increases in 2014, but the size of the increase will be sensitive to EPA decisions about how to implement the Renewable Fuel Standard (RFS). Prices for the Renewable Identification Numbers (RINs) used to monitor RFS compliance will remain high if mandates are set at levels that require more biofuel use than is possible in 10 percent ethanol blends.
- Lower feed prices will reduce livestock and poultry production expenses, resulting in greater profitability and setting the stage for increases in meat production. In the case of the beef sector, however, reduced livestock herds mean beef production will reach a low in 2014.
- In spite of the 2012 drought, consumer food price inflation remains moderate.

For more detail on the livestock, poultry and dairy sectors and on consumer food prices, see a companion report by the MU Agricultural Markets and Policy team, at <http://amap.missouri.edu/>.

Table of contents

Macro assumptions	3
Policy assumptions	3
U.S. corn supply and use	4
U.S. ethanol supply and use	5
U.S. soybean supply and use	6
U.S. soybean product supply and use	7
U.S. biodiesel supply and use	7
U.S. wheat supply and use	8
U.S. upland cotton supply and use	9
U.S. rice supply and use	10
U.S. hay supply and use	11
U.S. planted and idled area	11
U.S. beef sector	12
U.S. pork sector	12
U.S. poultry supply and use	13
U.S. per-capita meat consumption	13
U.S. dairy sector	14
U.S. consumer food price inflation	14

A word about policy assumptions

Following normal FAPRI-MU practice, the baseline update assumes a continuation of current policies, even where changes are possible or perhaps likely. For example, a continuation of 2008 farm bill provisions is assumed, even though the House and Senate have passed bills that would significantly alter farm legislation. Direct and countercyclical payments and the Average Crop Revenue Election (ACRE) program are continued in this baseline, and none of the new programs proposed in the House and Senate bills is included here.

In the case of the RFS, it was necessary to make some assumptions about how the Environmental Protection Agency (EPA) will implement current law. In past years, EPA has left the total RFS and the mandates for use of advanced biofuels unchanged even when they have reduced the mandate for the use of cellulosic biofuels. However, in recently announcing the 2013 RFS, EPA suggested that it might reduce the overall and advanced RFS for 2014, in light of concerns about the feasibility of meeting the targets set by the 2007 Energy Independence and Security Act (EISA).

For purposes of this baseline, we have assumed that EPA will use its existing authority to reduce the total and advanced RFS mandates by exactly the same amount as it reduces the mandate for cellulosic biofuels in 2014 and subsequent years. This has the practical effect of leaving the portion of the mandate that can be met with conventional biofuels, such as corn ethanol, at the levels originally envisioned in EISA, reaching 15 billion gallons in 2015. Alternative policy choices by EPA are, of course, possible, and this analysis could be used as a point of reference for examining the impact of such alternatives.

Macroeconomic assumptions*

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018
Real GDP growth								
				(Percent)				
United States	1.8	2.2	1.6	2.7	3.5	3.1	3.0	2.7
World	3.0	2.5	2.4	3.4	4.0	4.0	3.9	3.8
China	9.3	7.8	7.5	7.8	8.2	8.0	7.5	7.1
U.S. CPI inflation	3.1	2.1	1.3	1.5	1.7	1.9	1.8	1.8
U.S. interest rates								
Federal funds rate	0.1	0.1	0.1	0.2	0.4	2.2	3.8	4.0
Prime rate	3.3	3.3	3.3	3.3	3.4	5.2	6.8	7.0
Aaa corporate bonds	4.6	3.7	4.1	4.5	4.8	5.5	5.9	6.0
Exchange rates				(Currency per dollar)				
Euro	0.72	0.78	0.77	0.78	0.77	0.75	0.74	0.73
Chinese yuan	6.46	6.31	6.15	6.02	5.86	5.74	5.65	5.59

*Source: IHS Global Insight forecast, July 2013

Policy assumptions

Year	2011	2012	2013	2014	2015	2016	2017	2018
Direct payment rates				(Dollars per bushel)				
Corn	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Soybeans	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Wheat	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Biofuel tax credits				(Dollars per gallon)				
Ethanol tax credit	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Biodiesel credit	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Cellulosic credit	0.56	1.01	1.01	0.00	0.00	0.00	0.00	0.00
Renewable fuel standard				(Million gallon)				
Total specified in EISA	13,950	15,200	16,550	18,150	20,500	22,250	24,000	26,000
Total, as applied	13,950	15,200	16,550	16,468	17,655	18,214	18,780	19,355
Advanced biofuels	1,350	2,000	2,750	2,068	2,655	3,214	3,780	4,355
Cellulosic biofuels	0	0*	6	68	155	214	280	355
Biodiesel	800	1,000	1,280	1,280	1,280	1,280	1,280	1,280
"Gap" for conventional	12,600	13,200	13,800	14,400	15,000	15,000	15,000	15,000

*The 2012 cellulosic requirement was vacated via court decision

U.S. corn supply and use

September-August year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Area	(Million acres)							
Planted area	91.9	97.2	97.4	92.2	92.9	93.1	93.2	93.1
Harvested area	84.0	87.4	89.1	84.3	84.9	85.1	85.1	85.1
Yield	(Bushels per harvested acre)							
	147.2	123.4	154.4	163.7	165.7	167.8	169.9	171.6
Supply	(Million bushels)							
Beginning stocks	1,128	989	719	1,774	1,869	1,885	1,888	1,895
Production	12,360	10,780	13,763	13,799	14,069	14,276	14,455	14,603
Imports	29	165	30	30	30	30	30	30
Domestic use	10,985	10,500	11,484	11,936	12,134	12,195	12,217	12,220
Feed and residual	4,546	4,450	5,045	5,076	5,075	5,131	5,153	5,171
Ethanol and coproducts	5,011	4,650	4,991	5,393	5,590	5,591	5,582	5,560
HFCS	513	505	505	510	506	506	509	510
Seed	25	25	23	23	24	24	24	23
Food and other	890	870	919	935	939	944	950	955
Exports	1,543	715	1,255	1,799	1,949	2,107	2,261	2,408
Total use	12,528	11,215	12,738	13,735	14,083	14,302	14,479	14,628
Ending stocks	989	719	1,774	1,869	1,885	1,888	1,895	1,900
Under loan	41	30	95	119	114	111	110	108
Other stocks	948	689	1,679	1,750	1,771	1,777	1,786	1,792
Prices, program provisions	(Dollars per bushel)							
Farm price	6.22	6.95	4.64	4.37	4.44	4.49	4.52	4.56
Loan rate	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95
Target price	2.63	2.63	2.63	2.63	2.63	2.63	2.63	2.63
Direct payment rate	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Market returns	(Dollars)							
Gross market revenue/a.	915.32	857.49	716.26	715.59	735.42	753.64	768.21	781.96
Variable expenses/a.	335.25	352.00	356.55	354.40	354.96	359.27	363.47	367.60
Market net return/a.	580.07	505.49	359.71	361.18	380.46	394.37	404.74	414.36

U.S. ethanol supply and use

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018
Petroleum fuel prices								
	(Dollars per barrel)							
Petroleum, W. Texas interm.	95.07	94.21	94.52	89.57	89.40	92.79	96.45	100.34
Petroleum, refiners acquisition	101.75	101.01	96.19	88.35	87.95	90.60	93.67	96.96
	(Dollars per gallon)							
Unl. gasoline, FOB Omaha	2.90	2.95	2.87	2.67	2.68	2.74	2.82	2.90
Unleaded gasoline, retail	3.53	3.56	3.52	3.32	3.34	3.40	3.47	3.56
	(Million gallons)							
Motor gasoline supplied	134,180	133,783	133,101	133,983	135,530	136,361	136,481	135,913
Ethanol supply and use								
Production	13,948	13,300	13,047	14,326	15,480	15,860	15,800	15,927
From corn	13,711	13,084	12,812	14,058	15,122	15,442	15,325	15,388
From other feedstocks	237	212	228	236	249	256	250	244
Cellulosic	0	4	7	32	109	163	225	295
Imports	132	489	433	329	366	734	1,045	1,356
Domestic disappearance	12,872	12,945	13,065	14,116	15,362	16,180	16,364	16,783
In low-level blends	12,747	12,817	12,849	13,071	13,037	12,958	12,917	12,756
In mid-level blends	0	1	4	113	261	390	467	587
In flex fuel vehicles	125	127	212	932	2,065	2,832	2,980	3,440
Exports	1,195	742	526	529	467	396	465	485
Ending stocks	766	868	757	767	783	801	816	831
Ethanol prices								
	(Dollars per gallon)							
Conventional rack, Omaha	2.70	2.37	2.59	2.16	2.13	2.12	2.04	2.02
Other advanced rack	3.43	2.95	2.72	2.16	2.15	2.47	2.57	2.61
Effective retail	2.86	2.96	2.55	1.78	1.74	1.83	1.87	1.85
Ethanol/gasoline retail	81.0%	83.1%	72.5%	53.5%	52.1%	53.9%	54.0%	51.9%
RIN values								
	(Dollars per gallon)							
Conventional ethanol	0.02	0.02	0.69	1.03	1.05	0.95	0.82	0.83
Other advanced ethanol	0.75	0.60	0.81	1.03	1.07	1.30	1.35	1.42

U.S. soybean supply and use

September-August year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Area	(Million acres)							
Planted area	75.0	77.2	77.2	78.0	77.1	77.6	77.8	77.8
Harvested area	73.8	76.1	76.4	76.9	76.0	76.5	76.7	76.7
Yield	(Bushels per harvested acre)							
	41.9	39.6	42.6	44.1	44.6	45.1	45.6	46.0
Supply	(Million bushels)							
Beginning stocks	3,325	3,219	3,395	3,600	3,634	3,685	3,725	3,758
Production	215	169	125	191	227	216	211	210
Imports	3,094	3,015	3,255	3,393	3,392	3,453	3,499	3,533
	16	35	15	15	15	15	15	15
Domestic use	1,790	1,779	1,803	1,858	1,887	1,923	1,953	1,980
Crush	1,703	1,685	1,682	1,727	1,756	1,791	1,820	1,845
Seed and residual	87	94	120	132	131	132	133	134
Exports	1,365	1,315	1,402	1,514	1,531	1,551	1,562	1,569
Total use	3,155	3,094	3,204	3,372	3,418	3,474	3,515	3,548
Ending stocks	169	125	191	227	216	211	210	209
Under loan	4	3	9	17	15	14	14	14
Other stocks	165	122	182	210	202	197	196	196
Prices, program provisions	(Dollars per bushel)							
Farm price	12.50	14.40	11.33	10.01	10.45	10.75	10.89	11.00
Illinois processor price	13.69	15.07	11.76	10.48	10.91	11.20	11.34	11.44
Loan rate	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Target price	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Direct payment rate	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Market returns	(Dollars)							
Gross market revenue/a.	524.14	570.48	482.98	441.66	466.28	485.20	496.95	506.60
Variable expenses/a.	138.94	150.82	154.46	155.45	156.42	158.72	161.00	163.58
Market net return/a.	385.20	419.66	328.51	286.21	309.86	326.48	335.95	343.02
Other indicators								
Soybean/corn price ratio	2.01	2.07	2.44	2.29	2.35	2.39	2.41	2.42
48% soymeal price, \$/ton	393.53	455.00	317.95	293.56	303.43	314.92	314.12	315.79
Soyoil price, cents/lb.	51.90	47.00	47.05	42.13	43.83	44.73	46.23	46.92
Crushing margin, \$/bu.	1.81	1.22	1.28	1.41	1.42	1.50	1.52	1.53

U.S. soybean product supply and use

October-September year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Soybean meal								
	(Thousand tons)							
Production	41,025	39,900	40,139	41,200	41,899	42,736	43,424	44,030
Imports	216	350	165	165	165	165	165	165
Domestic use	31,548	29,350	30,480	30,988	31,128	31,452	32,005	32,467
Exports	9,743	10,900	9,791	10,364	10,940	11,452	11,582	11,728
Ending stocks	300	300	333	345	342	339	340	341
Soybean oil								
	(Million pounds)							
Production	19,740	19,780	19,507	20,023	20,363	20,770	21,104	21,399
Imports	149	350	250	200	200	200	200	200
Domestic use	18,311	18,550	18,544	18,636	19,043	19,376	19,734	20,072
Biodiesel	4,870	4,600	5,046	4,986	5,302	5,545	5,866	6,158
Food and other	13,441	13,950	13,498	13,649	13,741	13,832	13,868	13,914
Exports	1,464	2,150	1,415	1,402	1,563	1,589	1,624	1,540
Ending stocks	2,540	1,970	1,769	1,955	1,911	1,915	1,861	1,848
Decatur prices								
	(Dollars per ton)							
Soybean meal 48% protein	393.53	455.00	317.95	293.56	303.43	314.92	314.12	315.79
	(Cents per pound)							
Soybean oil	51.90	47.00	47.05	42.13	43.83	44.73	46.23	46.92

U.S. biodiesel supply and use

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018
Supply and use								
	(Million gallons)							
Production	1,100	1,102	1,347	1,283	1,340	1,439	1,490	1,572
From soybean oil	539	522	689	644	649	702	726	774
From corn oil	40	74	106	123	179	206	216	228
From other fats and oils	521	503	544	491	481	497	511	530
Cellulosic diesel	0	2	8	24	31	34	37	40
Net exports	37	88	54	37	39	40	42	42
Domestic disappearance	1,063	1,014	1,293	1,246	1,301	1,398	1,448	1,530
Prices and RIN values								
	(Dollars per gallon)							
Biodiesel rack, Des Moines	5.18	4.44	4.57	4.12	4.01	4.17	4.29	4.43
#2 diesel, refiner sales	3.03	3.11	3.02	2.76	2.68	2.69	2.76	2.84
Biodiesel RIN (biodiesel gal.)	1.87	1.62	1.22	1.84	1.75	1.94	2.02	2.13
Biodiesel RIN (RIN gal.)	1.25	1.08	0.81	1.23	1.17	1.30	1.35	1.42

U.S. wheat supply and use

June-May year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Area	(Million acres)							
Planted area	54.4	55.7	56.5	57.0	54.5	54.1	54.3	54.3
Harvested area	45.7	49.0	45.7	48.3	46.1	45.8	45.9	45.9
Yield	(Bushels per harvested acre)							
	43.7	46.3	46.2	46.3	46.7	47.2	47.6	47.9
Supply	(Million bushels)							
Beginning stocks	2,974	3,134	2,962	2,942	2,910	2,906	2,917	2,929
Production	862	743	718	588	637	628	615	609
Imports	1,999	2,269	2,114	2,238	2,157	2,161	2,184	2,200
	112	123	129	116	116	118	119	120
Domestic use	1,180	1,409	1,282	1,220	1,226	1,222	1,227	1,233
Feed and residual	162	390	251	178	177	168	166	166
Seed	76	73	74	71	71	71	72	72
Food and other	941	945	956	971	978	983	989	996
Exports	1,051	1,007	1,092	1,084	1,057	1,070	1,081	1,091
Total use	2,231	2,416	2,374	2,304	2,282	2,292	2,308	2,325
Ending stocks	743	718	588	637	628	615	609	604
Under loan	8	8	10	20	19	18	17	16
Other stocks	735	711	578	617	608	597	592	588
Prices, program provisions	(Dollars per bushel)							
Farm price	7.24	7.77	7.11	5.90	5.92	6.10	6.19	6.28
Loan rate	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94
Target price	4.17	4.17	4.17	4.17	4.17	4.17	4.17	4.17
Direct payment rate	0.52	0.52	0.52	0.52	0.52	0.52	0.52	0.52
Market returns	(Dollars)							
Gross market revenue/a.	316.71	359.88	328.48	273.16	276.75	287.79	294.75	300.64
Variable expenses/a.	122.57	130.48	131.04	128.62	129.20	131.55	133.52	135.47
Market net return/a.	194.14	229.40	197.44	144.53	147.55	156.24	161.23	165.17

U.S. upland cotton supply and use

August-July year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Area	(Million acres)							
Planted area	14.43	12.08	10.02	10.89	10.30	10.38	10.18	10.11
Harvested area	9.16	9.14	7.52	8.76	8.27	8.34	8.17	8.11
Yield	(Pounds per harvested acre)							
	772	869	796	801	806	814	822	831
Supply	(Million bales)							
Beginning stocks	2.57	3.08	3.60	2.74	3.45	3.32	3.44	3.44
Production	14.72	16.54	12.47	14.61	13.88	14.14	14.00	14.04
Imports	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Domestic use								
Mill use	3.28	3.43	3.46	3.57	3.60	3.62	3.62	3.61
Exports	11.12	12.26	9.88	10.33	10.42	10.40	10.39	10.40
Total use	14.40	15.69	13.35	13.90	14.02	14.02	14.01	14.00
Unaccounted	-0.17	0.32	0.00	0.00	0.00	0.00	0.00	0.00
Ending stocks	3.08	3.60	2.74	3.45	3.32	3.44	3.44	3.48
Prices, program provisions	(Dollars per pound)							
Farm price	0.883	0.720	0.824	0.748	0.771	0.761	0.766	0.766
Far East A index price	0.998	0.880	1.001	0.890	0.928	0.911	0.918	0.917
Adjusted world price	0.789	0.672	0.793	0.682	0.720	0.702	0.710	0.708
Loan rate	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520
Target price	0.713	0.713	0.713	0.713	0.713	0.713	0.713	0.713
Direct payment	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067
User payment	0.040	0.030	0.030	0.030	0.030	0.030	0.030	0.030
Market returns	(Dollars)							
Gross market revenue/a.	833.99	783.72	802.01	719.51	745.32	746.67	761.68	771.61
Variable expenses/a.	479.80	521.66	537.10	539.59	543.67	554.82	561.48	568.06
Market net return/a.	354.19	262.06	264.91	179.92	201.66	191.85	200.20	203.56

U.S. rice supply and use

August-July year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Area	(Million acres)							
Planted area	2.69	2.70	2.47	2.73	2.72	2.68	2.64	2.62
Harvested area	2.62	2.68	2.45	2.69	2.68	2.64	2.60	2.58
Yield	(Pounds per harvested acre)							
	7,064	7,449	7,406	7,363	7,443	7,525	7,597	7,655
Supply	(Million hundredweight)							
Beginning stocks	252.8	261.6	238.2	250.8	253.6	254.0	253.5	254.5
Production	48.5	41.1	34.6	29.8	30.5	31.1	31.4	31.5
Imports	184.9	199.5	181.4	198.3	199.7	198.8	197.4	197.7
Domestic use	19.4	21.0	22.3	22.8	23.4	24.0	24.7	25.3
Exports	110.8	120.0	112.4	114.7	116.0	117.4	118.6	119.7
Total use	100.9	107.0	96.0	105.6	106.5	105.2	103.5	103.2
Ending stocks	211.7	227.0	208.4	220.3	222.5	222.5	222.0	222.9
Prices, program provisions	(Dollars per hundredweight)							
Farm price	41.1	34.6	29.8	30.5	31.1	31.4	31.5	31.6
Adjusted world price	14.50	14.90	15.16	14.72	14.77	14.72	14.81	14.97
Loan rate	13.14	12.42	12.82	12.56	12.63	12.53	12.57	12.74
Target price	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Direct payment	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50
Market returns	(Dollars)							
Gross market revenue/a.	2.35	2.35	2.35	2.35	2.35	2.35	2.35	2.35
Variable expenses/a.	1024.31	1109.87	1122.93	1083.56	1099.23	1107.63	1125.03	1146.30
Market net return/a.	546.22	556.95	558.25	547.36	549.96	560.18	568.29	576.52
	478.09	552.92	564.68	536.20	549.28	547.46	556.74	569.78

U.S. hay supply and use

May-April year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
				(Million acres)				
Area harvested	55.65	56.26	56.62	58.49	57.90	57.41	57.10	57.08
				(Tons per acre)				
Yield	2.36	2.13	2.47	2.43	2.44	2.45	2.46	2.47
				(Million tons)				
Production	131.2	119.9	139.9	142.4	141.3	140.7	140.5	140.9
Disappearance	132.1	127.1	134.9	139.6	140.7	141.0	141.1	141.4
Ending stocks	21.4	14.2	19.2	22.0	22.6	22.3	21.8	21.3
				(Dollars per ton)				
All hay price	178.00	191.00	182.20	149.30	146.77	149.92	155.03	159.63

U.S. planted and idled area

Marketing year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19
Planted area				(Million acres)				
Corn	91.94	97.16	97.38	92.23	92.94	93.15	93.17	93.14
Soybeans	75.05	77.20	77.18	78.00	77.09	77.61	77.76	77.81
Wheat	54.41	55.74	56.53	57.01	54.46	54.09	54.26	54.34
Upland cotton	14.43	12.08	10.02	10.89	10.30	10.38	10.18	10.11
Sorghum	5.48	6.24	7.20	6.97	7.26	7.17	7.12	7.07
Barley	2.56	3.64	3.48	3.52	3.27	3.26	3.23	3.21
Oats	2.50	2.76	3.03	3.10	3.05	2.97	2.92	2.89
Rice	2.69	2.70	2.47	2.73	2.72	2.68	2.64	2.62
Sunflower seed	1.54	1.92	1.57	1.89	1.94	1.97	1.97	1.99
Peanuts	1.14	1.64	1.10	1.04	1.25	1.22	1.23	1.22
Canola	1.07	1.77	1.31	1.26	1.29	1.29	1.27	1.27
Sugar beets	1.23	1.23	1.21	1.16	1.22	1.20	1.19	1.19
Sugarcane harvested	0.87	0.90	0.91	0.90	0.91	0.91	0.90	0.90
13-crop planted	254.90	264.96	263.36	260.69	257.71	257.89	257.84	257.74
Hay area harvested	55.65	56.26	56.62	58.49	57.90	57.41	57.10	57.08
13 crops + hay	310.56	321.22	319.98	319.18	315.61	315.31	314.95	314.83
Conservation reserve (CRP)	31.17	29.53	26.93	26.50	28.00	29.00	30.00	30.00
13 crops + hay + CRP	341.73	350.75	346.91	345.68	343.61	344.31	344.95	344.83
Double crop area	4.75	5.21	6.82	6.64	6.45	6.51	6.56	6.58
Total minus double crop	336.98	345.54	340.09	339.04	337.16	337.80	338.39	338.25

U.S. beef sector

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018	
				(Million head)					
Beef cows (Jan. 1)	30.8	30.2	29.3	29.0	29.5	30.2	30.8	31.0	
Dairy cows (Jan. 1)	9.1	9.2	9.2	9.2	9.2	9.3	9.3	9.4	
Cattle and calves (Jan. 1)	92.7	90.8	89.3	88.0	88.2	89.0	90.0	90.9	
				(Million pounds)					
Beef supply and use									
Production	26,281	25,996	25,457	24,497	24,648	25,070	25,707	26,386	
Imports	2,057	2,220	2,308	2,629	2,769	2,869	2,865	2,812	
Domestic use	25,538	25,755	25,369	24,700	24,814	25,211	25,703	26,186	
Exports	2,785	2,453	2,433	2,478	2,598	2,713	2,852	2,994	
Ending stocks	600	608	570	518	523	539	557	575	
				(Dollars per hundredweight)					
Prices									
Total all grades, 5-area direct steers	114.73	122.86	125.12	129.08	129.46	128.08	125.81	123.74	
600 - 650 #, Oklahoma City feeder steers	141.25	158.19	158.73	170.52	172.19	167.05	160.19	154.16	
Boxed beef cutout	181.29	190.67	195.75	202.24	202.81	201.97	200.20	198.75	
				(Dollars per pound)					
Beef retail	4.83	5.02	5.30	5.42	5.52	5.52	5.46	5.42	

U.S. pork sector

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018	
				(Million head)					
Breeding herd (Dec. 1*)	5.78	5.80	5.82	5.83	5.89	5.96	5.94	5.86	
Market hogs (Dec. 1*)	59.1	60.6	60.6	61.2	62.6	63.8	64.5	64.4	
				(Million pounds)					
Pork supply and use									
Production	22,775	23,270	23,429	24,049	24,783	25,370	25,709	25,718	
Imports	803	802	823	829	852	869	874	885	
Domestic use	18,388	18,608	19,159	19,585	20,117	20,512	20,672	20,558	
Exports	5,190	5,381	5,073	5,292	5,511	5,707	5,903	6,051	
Ending stocks	542	625	646	647	654	675	683	677	
				(Dollars per hundredweight)					
Prices									
Barrows & gilts, national base				(Dollars per hundredweight)					
51-52% lean equivalent	66.11	60.88	63.73	61.50	58.14	55.63	54.65	55.27	
Pork cutout value	93.69	84.59	90.97	89.37	85.72	83.33	83.25	85.41	
				(Dollars per pound)					
Pork retail	3.43	3.47	3.56	3.55	3.50	3.46	3.45	3.55	

* Preceding year

U.S. poultry supply and use

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018
Broiler								
	(Million pounds)							
Production	36,804	36,643	37,281	38,598	39,571	40,090	40,460	40,935
Imports	107	111	115	112	114	116	118	120
Domestic use	30,126	29,419	29,929	31,081	31,871	32,246	32,500	32,848
Exports	6,968	7,274	7,476	7,603	7,788	7,954	8,081	8,205
Ending stocks	590	651	642	668	695	701	698	699
Turkey								
Production	5,715	5,889	5,824	6,023	6,203	6,258	6,291	6,342
Imports	21	24	21	20	21	21	22	22
Domestic use	5,014	5,030	5,124	5,243	5,402	5,452	5,475	5,510
Exports	702	798	742	786	806	821	836	851
Ending stocks	211	296	274	288	304	310	311	314
Prices								
	(Cents per pound)							
National composite								
wholesale broiler*	79.03	86.98	101.01	93.40	89.95	89.99	91.80	92.97
Broiler retail	176.72	189.25	198.50	196.96	192.12	192.45	196.82	201.72
8-16 pound wholesale turkey	102.02	105.55	100.21	97.20	93.80	93.93	95.57	96.76
Turkey retail	158.37	162.17	159.01	155.93	154.17	154.63	157.34	160.59

*12-city wholesale prior to 2013

U.S. per-capita meat consumption

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018
	(Pounds)							
Beef	57.3	57.4	56.1	54.2	54.0	54.4	55.1	55.7
Pork	45.7	45.9	46.9	47.6	48.5	49.1	49.1	48.5
Broiler	82.9	80.4	81.2	83.6	85.1	85.5	85.5	85.7
Turkey	16.1	16.0	16.2	16.4	16.8	16.8	16.8	16.7
Sum	202.0	199.7	200.4	201.9	204.4	205.8	206.4	206.6

U.S. dairy sector

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018
US milk supply								
Dairy cows (thou. head)	9,194	9,233	9,217	9,213	9,267	9,320	9,352	9,369
Milk yield (lbs. per cow)	21,337	21,697	21,927	22,296	22,558	22,792	23,028	23,262
Milk production (bil. lbs.)	196.2	200.3	202.1	205.4	209.0	212.4	215.3	217.9
(Dollars per hundredweight)								
All milk price	20.25	18.56	19.73	19.65	19.04	18.79	18.81	18.83
Wholesale prices								
(Dollars per pound)								
Butter, CME	1.96	1.60	1.50	1.53	1.50	1.47	1.49	1.50
Cheese, Am., 40#, CME	1.81	1.70	1.76	1.78	1.74	1.71	1.72	1.72
Nonfat dry milk, AA	1.55	1.38	1.65	1.60	1.57	1.56	1.55	1.54
Evaporated	1.98	1.97	1.77	1.73	1.71	1.71	1.71	1.72
Dairy product production								
(Million pounds)								
American cheese	4,227	4,358	4,505	4,610	4,698	4,771	4,825	4,865
Other cheese	6,368	6,532	6,834	7,017	7,198	7,371	7,530	7,676
Butter	1,810	1,860	1,811	1,847	1,885	1,924	1,950	1,972
Nonfat dry milk	1,868	2,079	2,086	2,173	2,262	2,330	2,391	2,448

U.S. consumer food price inflation

Calendar year	2011	2012	2013	2014	2015	2016	2017	2018
(Change from the previous year)								
FOOD	3.7%	2.6%	2.0%	2.4%	1.7%	2.0%	2.2%	2.1%
Food at home	4.8%	2.5%	1.7%	2.3%	1.5%	1.9%	2.1%	2.0%
Cereal and bakery	3.9%	2.8%	1.6%	2.0%	0.8%	1.7%	1.9%	1.7%
Meat	7.4%	3.5%	2.5%	2.2%	1.1%	1.8%	2.1%	2.1%
Dairy	6.8%	2.1%	1.0%	1.7%	1.0%	1.5%	1.9%	1.7%
Fruits and vegetables	4.1%	-0.6%	2.6%	2.8%	2.2%	2.7%	2.9%	2.6%
Other food at home	3.3%	3.8%	0.4%	2.2%	1.8%	1.6%	1.6%	1.6%
Food away from home	2.3%	2.8%	2.3%	2.5%	2.0%	2.0%	2.3%	2.2%