

2019 Baseline Update for Livestock and Dairy Markets

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Growth in meat production continues, with 2019 marking the fifth consecutive year of output increasing by at least two percent. This follows a stretch from 2009-2014 when the largest annual increase in total U.S. meat production was 1.3 percent, and the average change was a decrease of 0.3 percent.

Projections include one more year of strong output growth in 2020, before production growth slows.

Markets continue to struggle to assess the effect of hog losses due to African Swine Fever (ASF) in China and other areas of the world. Global pork production will sharply decline for the remainder of this year and into 2020, but how this will affect U.S. pork exports and hog prices is less certain. With tariffs remaining in place for many U.S. agriculture products exported to China, the timing and extent of pork export growth to that market has a wide range of plausible outcomes. This will continue to keep volatility high in hog futures markets.

Though meat exports are projected to increase again in 2019, higher exports will absorb less than one quarter of meat production increases, leaving more meat available for U.S. consumers. While meat demand has been a positive for the livestock industry in recent years, with per capita supplies approaching the record high this year and more meat on the way in 2020, prices will continue to drift lower in the absence of large positive jumps in demand strength.

Beef cow herd expansion appears to be coming to an end, with USDA reporting beef cow numbers on July 1 identical to last year's level. Though pasture and range conditions have been much improved this spring and summer relative to previous years, cow-calf returns have reached the lowest level in a decade as feeder steer prices decline with cattle on feed numbers continuing to exceed year ago levels. Fed steer prices had been steady for most of the first half of the year, with recent weakness noted due to the August 9 fire at a Tyson cattle processing plant in Kansas. This has strained already tight beef packing capacity, resulting in higher beef prices along with depressed demand for cattle. Cattle and beef prices will remain under pressure as beef production grows through 2020. Good domestic demand for beef, particularly higher-quality product, continues to prevent even larger price declines. Beef exports have been slightly below year ago levels, with higher shipments to South Korea more than offset by declines to Japan and Hong Kong. U.S. beef exports have been facing higher tariffs in Japan than Australia, contributing to the slowdown in shipments to the top international market for U.S. beef.

Several factors are contributing to the second largest annual jump in pork production since 2008. The hog breeding herd as of June 1 was up 7.2 percent from just three years ago and at the highest level since 1999. Pigs per litter growth has been strong for the first half of the year, and the largest increase in hog slaughter weights since 2014 has contributed to strong pork output growth. Farrow-finish returns have remained positive for most months of 2019, as hog prices ran sharply higher this spring, in large part due to expectations of larger pork exports to balance the decline in world pork output due to the ASF outbreak. However, actual shipments have not yet seen a notable increase, and prices for this fall will depend largely upon whether higher pork export expectations are realized or not. Higher corn prices

this summer have resulted in slightly higher feed costs, with a lot of uncertainty also surrounding the size of this year's corn crop. This projection assumes enough pork export gains to keep farrow-finish returns breakeven for this year and positive in 2020, though disappointments on the trade front or a smaller than expected corn crop could quickly and severely dampen hog producer finances.

After only minor gains in chicken output for the first quarter of the year, production has been three percent higher than year ago levels since early April. While chicken production projections for this year and 2020 are below the average gains from 2013-2018, they are combining with sharp increases in pork production and continued elevated beef supplies to pressure domestic meat market prices. Though growth is expected in chicken exports for this year and next, levels will remain below the 2013 peak, resulting in an increase of more than twelve percent for per capita chicken supplies in 2019 relative to just five years ago. Wholesale chicken prices have struggled this summer, nearing 80 cents per pound in recent weeks. Turkey output has remained nearly steady in 2019, allowing for some recovery in prices following back to back years of sharp declines. Egg prices have been weak and are on pace for the second lowest annual average since 2006 this year. This should lead to a slowdown in egg production growth in 2020.

Dairy cow numbers have declined more than one hundred thousand head from the recent inventory peak in 2018. This has kept milk production steady with year ago levels through July. Milk output this year is projected to remain below the population growth rate for the first time since 2013. The halt in milk supply growth has resulted in stronger milk prices, with the all milk price projected to average above \$18 per hundredweight this year and in 2020. Exports of nonfat dry milk are lower this year, keeping prices near \$1 per pound. However, butter prices have remained firm, and cheese demand appears solid. The reduction in milk output in Australia due to drought conditions has helped to maintain international dairy cheese and nonfat dry milk prices at or above year ago levels. With the recent milk price recovery primarily due to slower supply growth, it is essential for producers to keep output growth restrained if prices are to remain at or above current levels.

Growth in the CPI for food is expected to top 2.0 percent for the first time since 2014 this year. There has been a sharp dichotomy between the CPI for food at home and the CPI for food away from home in recent years, with away from home food inflation ranging from 2.0 and 3.0 percent each year since 2011, and food at home inflation averaging just 0.3 percent from 2015-2019. While food inflation is expected to remain at or above 2.0 percent annual growth for the next few years, consumers should see meat prices growing more slowly than the average rate from 2010-2018 this year and next.

This baseline update was prepared in collaboration with the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri. FAPRI, also a part of the Integrated Policy Group in the MU Division of Applied Social Sciences, prepared the crop and biofuel projections consistent with the livestock and dairy information in this report. A brief summary of crop price projections is included with this report and more detail regarding crop and biofuel outcomes is available from FAPRI's companion report, accessible at <http://www.fapri.missouri.edu>.

U.S. Cattle Sector

Calendar year	2017	2018	2019	2020	2021	2022	2023	2024
	(Million head)							
Beef cows (Jan. 1)	31.2	31.5	31.8	31.8	31.6	31.3	31.0	30.7
Dairy cows (Jan. 1)	9.4	9.4	9.4	9.3	9.3	9.3	9.3	9.3
Cattle and calves (Jan. 1)	93.6	94.3	94.8	94.8	94.2	93.7	93.3	92.8
Calf crop	35.8	36.4	36.3	36.2	36.0	35.7	35.4	35.2
Calf death loss	2.1	2.2	2.2	2.1	2.0	2.0	2.0	2.0
Calf slaughter	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Beef cow slaughter	2.8	3.1	3.1	3.5	3.5	3.4	3.3	3.2
Dairy cow slaughter	3.0	3.2	3.2	3.1	2.9	2.9	2.9	2.9
Bull slaughter	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Steer and heifer slaughter	25.9	26.3	26.7	27.1	27.1	26.9	26.8	26.7
Total slaughter	32.8	33.7	34.2	34.8	34.6	34.3	34.1	33.9
Cattle imports	1.8	1.9	2.1	2.1	2.2	2.2	2.3	2.3
Cattle exports	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3
Cattle death loss	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Residual	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Cattle and calves (Dec. 31)	94.3	94.8	94.8	94.2	93.7	93.3	92.8	92.4
Cattle on feed (Jan. 1)	13.1	14.1	14.4	14.4	14.5	14.4	14.3	14.2
	(Million pounds)							
Supply								
Beginning stocks	757	649	662	656	676	685	686	686
Imports	2,993	2,998	3,045	3,004	3,057	3,093	3,131	3,189
Production	26,250	26,938	27,278	28,022	28,134	28,076	28,013	27,958
Total	30,000	30,585	30,985	31,683	31,867	31,853	31,830	31,832
Disappearance								
Domestic use	26,492	26,762	27,162	27,710	27,790	27,813	27,834	27,892
Exports	2,859	3,161	3,167	3,296	3,393	3,354	3,310	3,253
Total	29,351	29,923	30,329	31,006	31,183	31,167	31,144	31,145
Ending stocks	649	662	656	676	685	686	686	687
	(Pounds)							
Per capita consumption								
Carcass weight	81.4	81.7	82.4	83.4	83.1	82.6	82.1	81.7
Retail weight	57.0	57.2	57.7	58.4	58.2	57.8	57.5	57.2
Change	2.5%	0.4%	0.8%	1.3%	-0.4%	-0.6%	-0.6%	-0.5%
	(Dollars per hundredweight)							
Prices								
Total all grades, 5-area direct steers	121.52	117.12	116.58	113.64	113.83	116.62	121.34	126.05
600 - 650 #, Oklahoma City feeder steers	155.82	159.20	153.61	145.28	149.66	154.30	162.33	170.42
Utility cows, Sioux Falls	66.74	61.19	57.16	56.09	57.15	59.41	63.29	67.17
Boxed beef cutout	209.74	214.05	218.79	218.98	222.44	230.74	242.11	252.32
	(Dollars per pound)							
Beef retail	5.91	5.92	6.06	6.08	6.22	6.44	6.71	6.98
Change	-0.9%	0.3%	2.4%	0.3%	2.3%	3.6%	4.2%	4.0%
	(Dollars per cow)							
Cow-calf returns								
Receipts	799.87	781.59	739.82	733.40	756.99	787.54	831.70	873.56
Feed expenses	386.87	382.71	413.34	413.84	415.20	418.88	422.57	426.04
Non-feed expenses	266.47	278.53	291.62	294.57	302.22	310.34	320.96	331.30
Net returns	146.53	120.35	34.86	24.99	39.58	58.31	88.17	116.22

U.S. Swine Sector

Calendar year	2017	2018	2019	2020	2021	2022	2023	2024
	(Million head)							
Breeding herd (Dec. 1*)	6.11	6.18	6.33	6.38	6.37	6.27	6.13	5.99
Gilts added	3.10	3.24	3.19	3.09	3.00	2.90	2.81	2.82
Sow slaughter	2.97	3.03	3.07	3.04	3.03	2.98	2.90	2.82
Sows farrowed	12.22	12.51	12.69	12.83	12.79	12.60	12.35	12.15
Pigs per litter (head)	10.59	10.67	10.80	10.91	11.02	11.13	11.24	11.35
Market hogs (Dec. 1*)	65.2	67.0	68.6	69.6	70.4	70.7	70.2	69.5
Pig crop	129.4	133.5	137.0	139.9	140.9	140.2	138.8	137.9
Barrow and gilt slaughter	118.0	121.0	124.7	127.6	128.9	129.0	128.1	127.1
Hog imports	5.6	5.3	5.1	5.1	5.2	5.2	5.2	5.2
Hog exports	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Death loss/residual	15.3	16.1	16.3	16.6	16.7	16.7	16.6	16.4
Market hogs (Nov.30)	67.0	68.6	69.6	70.4	70.7	70.2	69.5	69.0
	(Million pounds)							
Supply								
Beginning stocks	507	554	559	565	585	602	610	605
Imports	1,116	1,042	956	929	977	1,018	1,044	1,066
Production	25,598	26,330	27,267	28,029	28,396	28,525	28,417	28,321
Total	27,221	27,926	28,782	29,523	29,957	30,145	30,071	29,991
Disappearance								
Domestic use	21,034	21,491	22,043	22,251	22,865	23,110	23,026	22,841
Exports	5,632	5,876	6,174	6,688	6,490	6,425	6,440	6,550
Total	26,666	27,367	28,217	28,939	29,355	29,535	29,466	29,391
Ending stocks	554	559	565	585	602	610	605	601
Per capita consumption								
	(Pounds)							
Carcass weight	64.6	65.6	66.8	67.0	68.4	68.6	67.9	66.9
Retail weight	50.2	50.9	51.9	52.0	53.1	53.3	52.7	51.9
Change	0.0%	1.5%	1.8%	0.2%	2.0%	0.4%	-1.0%	-1.5%
Prices								
Barrows & gilts, national base	(Dollars per hundredweight)							
51-52% lean equivalent	50.48	45.93	48.12	51.87	49.64	49.64	51.60	53.81
Pork cutout value	84.02	75.19	78.55	85.05	83.39	83.31	87.41	91.94
	(Dollars per pound)							
Pork retail	3.78	3.74	3.84	4.02	4.00	3.98	4.09	4.21
Change	1.0%	-1.1%	2.6%	4.7%	-0.4%	-0.5%	2.6%	3.0%
Farrow - finish returns								
	(Dollars per hundredweight)							
Receipts	50.75	45.65	47.76	51.56	49.30	49.30	51.29	53.53
Feed expenses	26.29	27.72	27.51	26.63	25.89	26.76	27.57	28.11
Non-feed expenses	20.03	20.13	20.24	20.23	20.49	20.90	21.34	21.76
Net returns	4.43	-2.20	0.01	4.71	2.93	1.64	2.38	3.66

* Preceding year

U.S. Poultry Supply and Use

Calendar year	2017	2018	2019	2020	2021	2022	2023	2024
Broiler								
	(Million pounds)							
Production	41,217	42,145	42,985	43,595	44,239	44,795	45,344	45,903
Imports	126	139	128	132	132	133	134	135
Domestic use	34,479	35,227	35,990	36,444	36,930	37,319	37,688	38,061
Exports	6,786	7,069	7,121	7,287	7,435	7,607	7,787	7,974
Ending stocks	856	845	846	842	848	850	852	855
Turkey								
Production	5,981	5,878	5,851	5,881	5,945	5,999	6,032	6,066
Imports	25	19	15	16	17	17	18	18
Domestic use	5,352	5,293	5,251	5,267	5,321	5,368	5,396	5,422
Exports	622	611	627	630	639	647	655	663
Ending stocks	310	303	291	291	292	293	292	291
Eggs								
	(Million dozens)							
Production	8,891	9,115	9,326	9,364	9,423	9,482	9,557	9,647
Imports	34	18	17	16	16	16	16	16
Domestic use	7,589	7,751	7,946	7,993	8,040	8,090	8,156	8,237
Hatching egg	1,035	1,058	1,066	1,086	1,092	1,096	1,099	1,101
Exports	355	333	314	300	306	312	318	325
Ending stocks	88	79	95	95	95	95	95	95
Prices								
	(Cents per pound)							
Nat'l comp. whlsle. Broiler	93.54	97.80	90.10	89.66	90.27	92.04	94.03	96.01
Broiler retail	187.56	187.29	187.05	186.84	189.61	193.43	197.61	201.88
Natl. wholesale turkey hens	96.08	80.20	87.99	90.61	92.10	93.60	95.15	96.33
Turkey retail	158.21	150.08	154.26	160.15	163.86	167.32	170.86	174.24
	(Cents per dozen)							
NY grade A large egg	100.90	137.60	89.40	97.43	103.28	108.24	112.77	114.98
Shell egg retail	146.71	174.17	148.07	151.19	159.41	165.82	171.80	175.79
Per capita consumption								
	(Pounds - retail weight)							
Broiler	91.0	92.4	93.7	94.3	94.9	95.2	95.5	95.8
Turkey	16.4	16.2	15.9	15.9	15.9	15.9	15.9	15.9
	(Eggs)							
Eggs	279.9	284.0	289.1	288.8	288.5	288.3	288.7	289.6
Feed-price ratios								
	(Ratios)							
Broiler	5.4	5.6	4.9	5.0	5.1	5.1	5.1	5.2
Turkey	7.2	5.6	6.1	6.5	6.8	6.7	6.7	6.7
Eggs	7.7	11.3	5.9	7.0	7.8	8.1	8.4	8.5

U.S. Dairy Sector

Calendar year	2017	2018	2019	2020	2021	2022	2023	2024
US milk supply								
Dairy cows (thou. head)	9,406	9,399	9,322	9,321	9,326	9,333	9,332	9,345
Milk yield (lbs.)	22,914	23,149	23,402	23,717	24,026	24,327	24,631	24,924
Milk production (bil. lbs.)	215.5	217.6	218.2	221.1	224.1	227.1	229.9	232.9
Min. FMMO class prices (Dollars per hundredweight)								
Class I mover	16.45	14.84	16.82	17.32	17.11	17.09	17.27	17.38
Class II	16.04	14.80	16.99	17.02	16.70	16.70	16.89	16.90
Class III	16.17	14.61	16.38	16.76	16.65	16.60	16.78	16.99
Class IV	15.16	14.23	16.29	16.32	16.00	16.00	16.19	16.20
All milk price	17.69	16.28	18.21	18.50	18.31	18.28	18.46	18.59
Wholesale prices (Dollars per pound)								
Butter, CME	2.33	2.25	2.31	2.21	2.17	2.18	2.21	2.22
Cheese, Am., 40#, CME	1.61	1.55	1.66	1.69	1.69	1.69	1.70	1.72
Nonfat dry milk, AA	0.88	0.81	1.02	1.08	1.06	1.05	1.06	1.05
Dairy product production (Million pounds)								
American cheese	5,072	5,254	5,273	5,350	5,436	5,515	5,588	5,669
Other cheese	7,568	7,771	7,861	8,011	8,158	8,294	8,425	8,564
Butter	1,847	1,891	1,927	1,988	2,041	2,079	2,113	2,150
Nonfat dry milk	2,365	2,340	2,246	2,324	2,373	2,440	2,511	2,594

U.S. Consumer Food Price Inflation

Calendar year	2017	2018	2019	2020	2021	2022	2023	2024
(Change from the previous year)								
FOOD	0.9%	1.4%	2.2%	2.3%	2.0%	2.3%	2.6%	2.6%
Food at home								
Cereal and bakery	-0.2%	0.4%	1.4%	2.1%	1.9%	2.2%	2.5%	2.5%
Meat	-0.5%	0.4%	1.9%	2.1%	1.9%	2.3%	2.5%	2.4%
Dairy	-0.7%	1.2%	0.6%	2.0%	1.9%	2.5%	3.0%	3.1%
Dairy	0.1%	-0.5%	1.2%	2.6%	2.1%	2.3%	2.6%	2.6%
Fruits and vegetables	-0.2%	0.7%	2.0%	2.1%	1.7%	1.8%	1.9%	1.9%
Other food at home	0.2%	0.2%	1.1%	1.5%	1.7%	1.9%	2.3%	2.2%
Food away from home								
	2.3%	2.6%	3.0%	2.5%	2.2%	2.4%	2.6%	2.7%

Selected Crop Prices

Marketing year	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
Corn (\$/bu.)	3.36	3.60	3.59	3.39	3.46	3.56	3.59	3.61
Wheat (\$/bu.)	4.72	5.16	5.00	4.92	4.91	5.02	5.11	5.15
Soybeans (\$/bu.)	9.33	8.50	8.43	7.94	8.20	8.45	8.65	8.58
Soybean meal (\$/ton)	345.02	310.00	298.58	283.36	292.31	297.81	305.10	303.14
Soybean oil (cents/lb.)	30.04	28.00	30.61	30.08	30.31	31.27	31.56	31.63
Upland cotton (cents/lb.)	68.60	70.00	59.42	59.70	60.03	61.00	61.74	62.43
Rice (\$/cwt)	12.90	12.10	12.20	12.28	12.16	12.17	12.13	12.23
All hay (\$/ton)	142.00	164.00	153.86	162.04	163.13	163.98	164.89	165.45
