U.S. Flock Trends and Projections

November 9, 2017



Compiled by

Maro Ibarburu

Sponsored in part by:



American Egg Board

The Egg Industry Center Market Reports & Industry Analysis are compiled in the memory of their creator, Don D. Bell, Poultry Extension Specialist Emeritus - UC Davis.

U.S. EGG INDUSTRY STATISTICAL REPORT SUMMARY

* The September hatch (straight-run chicks) was 6.0% lower than September 2016. This projects forward to a 17.8 million pullet placement for February of 2018 which is 1.1 million lower than February of 2017 placement (18.9).

* Current (September average, 2017) U.S. table egg layer number (312.2 million) is 0.2 percent larger than last year's number at this time (311.7 million), and 0.9 million larger than last month (311.3 million).

* In September, Iowa led the nation with 53.8 million laying hens compared to 31.7 million in Indiana, 30.0 million in Ohio, and 25.3 million in Pennsylvania. California (with 11.5 million layers) lost it's 5th position to Texas with 17.4 million layers.

* The October 1st U.S. rate of lay was 78.5% which is 0.7% lower than October 1st 2016 level. The total number of table eggs produced in September 2017 was 0.4% lower than the September 2016 production.

* The September 2017 number of eggs exported was 9% higher than last year (September 2016) and 3% higher than last month (August 2017). The September exports represented 4.1% of the number of eggs produced.

* Shell eggs broken for products in September 2017 totaled 6.126 million cases, 6.3% less than in September 2016 (6.539 million cases).

Monthly Highlights (Compared to September a year ago) (% change) - U.S.

	2016	2017	% Change
Hatch - Egg-Type Straight Run (thousands) (U.S.)	44,892	42,205	-6.0
Table Egg Layers (millions) (U.S.)	311.7	312.2	0.2
Rate of lay (percent)	79.0	78.9	-0.1
Molting (October 1, 2017) (percent in + out of a molt)	18.9	18.8	-0.5

Year-end layers (millions) - U.S.

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Million	284.7	285.6	285.2	286.8	290.1	298.6	308.2	311.3	291.1	318.6	320.0*

* estimated value

NOTE:

The rate of lay in table 3 was changed from the monthly average to the rate of lay on the 1st of each

SPECIAL NOTE:

Data for the previous month may be changed by the USDA to reflect updates following late submissions by responders.

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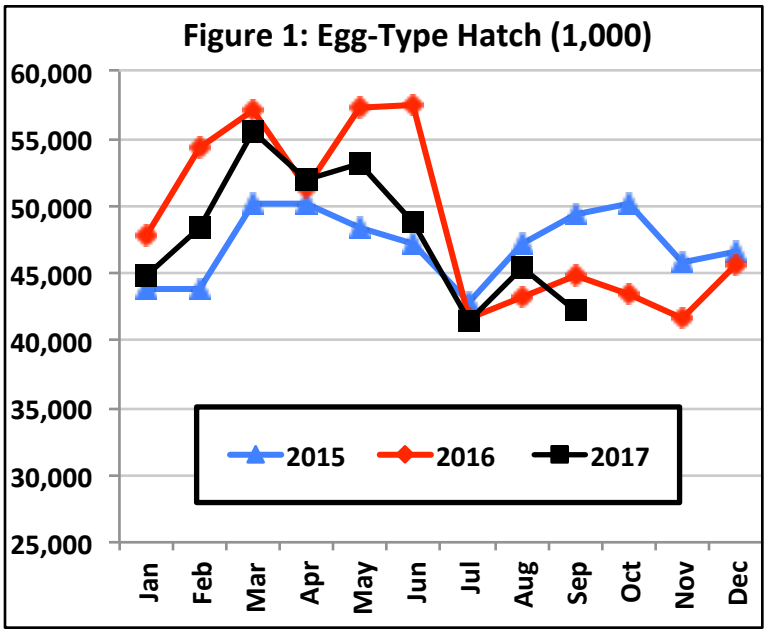
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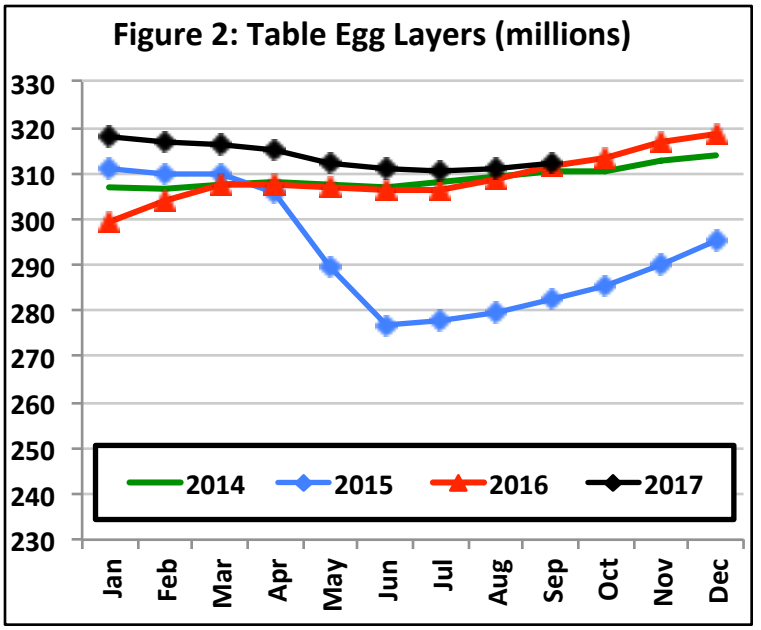
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EGG TYPE: EGGS IN INCUBATORS (on the 1st of the month) and STRAIGHT RUN HATCH (U.S.) **TABLE 1**

EGG-TYPE Eggs in Incubators (thousands)				EGG-TYPE Straight Run Hatch (thousands)				
month	2016	2017	Change (%)	month	2015	2016	2017	Change %
Jan	47,950	39,741	-17.1	Jan	43,868	47,775	44,906	-6.0
Feb	52,007	48,152	-7.4	Feb	43,774	54,289	48,456	-10.7
Mar	55,105	52,142	-5.4	Mar	50,187	57,055	55,457	-2.8
Apr	52,062	51,078	-1.9	Apr	50,193	51,266	52,025	1.5
May	52,257	47,517	-9.1	May	48,315	57,306	53,073	-7.4
Jun	54,050	46,556	-13.9	Jun	47,212	57,562	48,828	-15.2
Jul	44,077	41,218	-6.5	Jul	42,790	41,609	41,463	-0.4
Aug	37,677	40,123	6.5	Aug	47,131	43,258	45,439	5.0
Sep	42,826	40,068	-6.4	Sep	49,391	44,892	42,205	-6.0
Oct	39,979	45,831	14.6	Oct	50,194	43,344		
Nov	41,090			Nov	45,848	41,648		
Dec	45,460			Dec	46,679	45,633		
10 Month Avg.	47,799	45,243	-5.3	**9 Month Avg.**	46,985	50,557	47,984	-5.1
10 Month Total	477,990	452,426		**9 Month Total**	422,861	455,012	431,852	
12 Month Total	560,591			**12 Month Total**	565,582	585,637		

Source: USDA NASS Chickens and Eggs





AVERAGE U.S. TABLE EGG LAYERS (MILLIONS) **TABLE 2**

	TOTAL Table Egg Layers						% Change with respect to	
month	2012	2013	2014	2015	2016	2017	last year	2012-2016
Jan	289.6	298.7	307.2	311.2	299.3	318.1	6.3	5.6
Feb	289.7	299.7	306.7	310.0	304.0	316.8	4.2	4.9
Mar	290.7	300.4	307.7	310.2	307.4	316.1	2.8	4.2
Apr	290.2	298.1	308.3	305.9	307.4	314.9	2.4	4.3
May	289.2	296.6	307.6	289.3	307.0	312.3	1.7	4.8
Jun	288.3	296.9	307.0	276.9	306.5	310.8	1.4	5.3
Jul	287.7	297.4	308.2	278.1	306.4	310.6	1.4	5.1
Aug	289.3	299.4	309.6	279.7	308.6	311.3	0.9	4.7
Sep	291.8	300.1	310.4	282.4	311.7	312.2	0.2	4.3
Oct	295.3	301.1	310.7	285.6	313.6			
Nov	299.8	304.5	312.7	290.2	316.7			
Dec	300.2	307.1	313.8	295.6	318.8			
9 Month Avg.	289.6	298.6	308.1	293.7	306.5	313.7	2.3	4.8
Annual Avg.	291.8	300.0	309.2	292.9	309.0			

Source: USDA NASS Chickens and Eggs

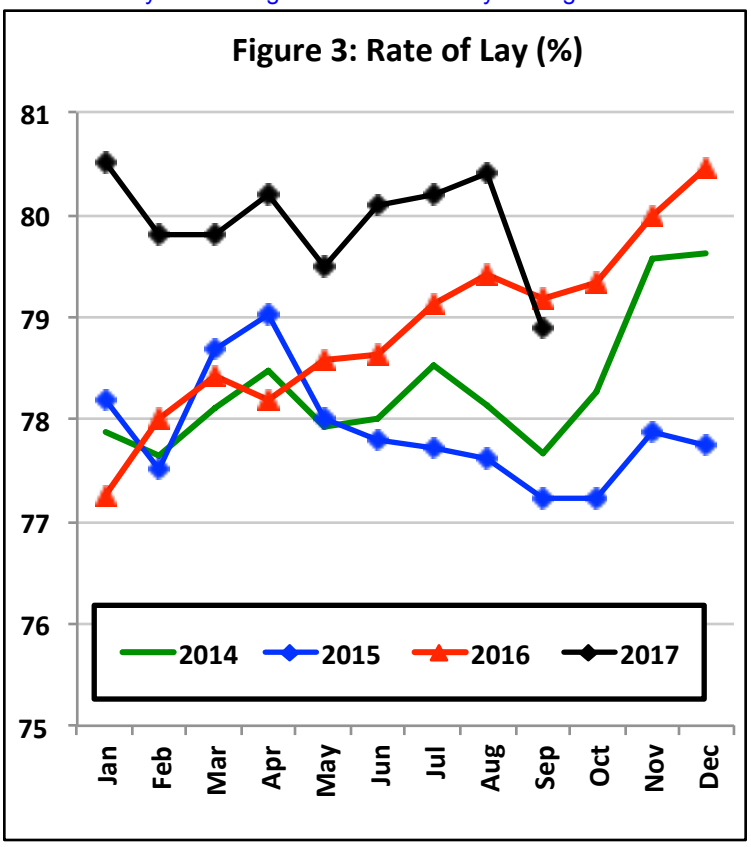
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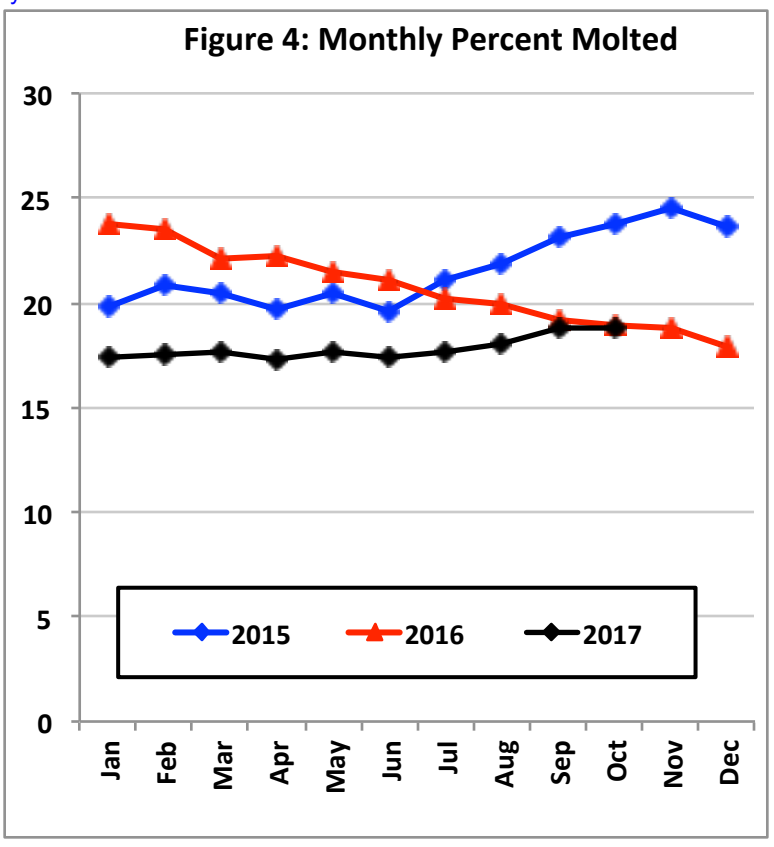
U.S. TABLE EGGS, AND RATE OF LAY on the 1st of EACH MONTH (ALL STATES) **TABLE 3**

month	Table Eggs - human consumption (millions) 2013	2014	2015	2016	2017	Change (%)	Rate of Lay (Table) 2016	2017
Jan	7,160	7,417	7,545	7,168	7,904	10.3	77.3	80.5
Feb	6,437	6,667	6,726	6,878	7,080	2.9	77.2	79.8
Mar	7,198	7,449	7,566	7,475	7,842	4.9	78.8	79.8
Apr	6,954	7,256	7,252	7,213	7,546	4.6	78.0	80.2
May	7,124	7,433	6,996	7,479	7,731	3.4	78.4	79.5
Jun	6,878	7,185	6,464	7,228	7,476	3.4	78.7	80.1
Jul	7,085	7,501	6,698	7,514	7,730	2.9	78.5	80.2
Aug	7,186	7,497	6,729	7,597	7,686	1.2	79.7	80.4
Sep	7,028	7,230	6,544	7,402	7,373	-0.4	79.0	78.9
Oct	7,300	7,539	6,837	7,712			79.2	78.5
Nov	7,172	7,465	6,778	7,602			79.6	
Dec	7,471	7,746	7,125	7,950			80.4	
9 Month Avg.	7,006	7,293	6,947	7,328	7,596	3.7	78.4	79.9
Annual Avg.	7,083	7,365	6,938	7,435			78.7	
Total	84,993	88,385	83,260	89,219				

Source: USDA NASS Chickens and Eggs

The rate of lay was changed from the monthly average to the rate of lay on the 1st of each month on November 2017.





INDUCED MOLT PERCENT - U.S. TOTALS (1ST OF MONTH) **TABLE 4**

	In a Molt		Completed a Molt		In a molt + Completed a Molt			
month	2016	2017	2016	2017	2015	2016	2017	Change
Jan	2.5	1.7	21.3	15.7	19.8	23.8	17.4	-6.4
Feb	3.0	2.2	20.5	15.3	20.8	23.5	17.5	-6.0
Mar	1.5	2.4	20.6	15.3	20.4	22.1	17.7	-4.4
Apr	3.0	1.7	19.2	15.6	19.7	22.2	17.3	-4.9
May	2.8	2.7	18.7	15.0	20.5	21.5	17.7	-3.8
Jun	2.9	2.4	18.2	15.0	19.6	21.1	17.4	-3.7
Jul	2.6	2.4	17.6	15.3	21.1	20.2	17.7	-2.5
Aug	2.6	2.5	17.3	15.5	21.9	19.9	18.0	-1.9
Sep	2.7	3.5	16.5	15.3	23.1	19.2	18.8	-0.4
Oct	2.1	2.8	16.8	16.0	23.8	18.9	18.8	-0.1
Nov	2.3		16.5		24.5	18.8		
Dec	1.5		16.4		23.6	17.9		
10 Month Avg.	2.6	2.4	18.7	15.4	21.1	21.2	17.8	-3.4
12 Month Avg.	2.5		18.3		21.6	20.8		

Source: USDA NASS Chickens and Eggs

SHELL EGGS BROKEN UNDER FEDERAL INSPECTION (MILLION CASES) **TABLE 5**

							% Change with respect to	
month	2012	2013	2014	2015	2016	2017	last year	2012-2016
Jan	5.666	5.765	5.865	6.634	5.639	6.540	16.0	10.6
Feb	5.524	5.374	5.325	5.746	5.484	6.192	12.9	12.8
Mar	5.715	5.831	6.086	6.030	6.308	6.601	4.6	10.1
Apr	5.634	5.950	6.205	6.061	6.255	6.126	-2.1	1.8
May	6.057	5.820	6.514	5.533	6.576	6.547	-0.4	7.3
Jun	5.955	6.118	6.532	6.408	6.679	6.604	-1.1	4.2
Jul	5.748	6.266	6.618	5.641	6.474	6.376	-1.5	3.7
Aug	6.523	6.200	6.596	5.589	6.804	6.603	-3.0	4.1
Sep	6.005	6.040	6.566	5.583	6.539	6.126	-6.3	-0.3
Oct	6.109	6.289	6.731	5.814	6.636			
Nov	5.577	5.738	6.086	5.350	6.499			
Dec	5.964	5.745	6.281	5.749	6.498			
9 Month Avg.	5.870	5.929	6.256	5.914	6.307	6.413	1.7	5.9
9 Month Total	52.827	53.364	56.307	53.225	56.759	57.715		
12 Month Total	70.477	71.136	75.405	70.138	76.391			

Source: USDA NASS Egg products - monthly

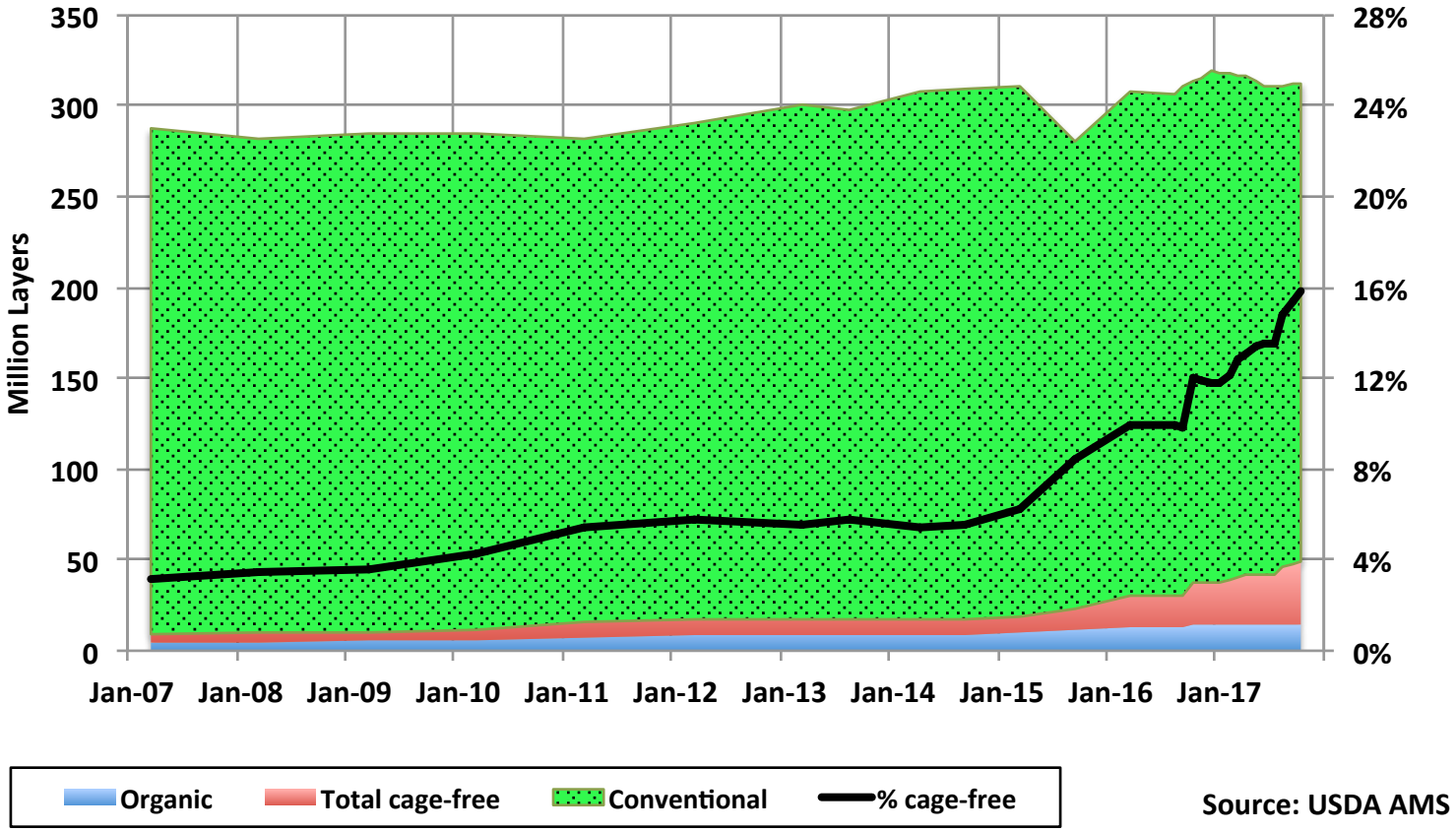
Million Cases Produced	236.092	245.515	231.279	247.832	189.909
% BROKEN	30.1	30.7	30.3	30.8	30.4

PER CAPITA EGG CONSUMPTION BY QUARTER **TABLE 6**

QUARTER	2010	2011	2012	2013	2014	2015	2016	2017*
1	61.8	61.3	63.2	64.2	65.6	65.7	67.5	68.5
2	61.9	61.5	62.2	63.3	66.2	62.9	67.4	68.2
3	62.5	62.8	63.3	64.6	67.2	61.9	68.8	69.0
4	63.1	64.3	65.6	66.1	68.5	65.7	71.0	70.0
Total	249.3	249.9	254.3	258.2	267.5	256.3	274.7	275.7
Change from previous year		0.6	4.4	3.9	9.3	-11.2	18.4	1.0

Source: USDA ERS Livestock and Meat Trade Data. *** Estimates for 2017 (10/2017)**

Figure 5: U.S. Cage-Free and Conventional Layers



Source: USDA AMS

CAGE-FREE LAYERS (MILLIONS) **TABLE 7**

	Non-Organic Cage-Free		Certified Organic		TOTAL Cage-Free Layers			Cage-Free %
	2016	2017	2016	2017	2016	2017	Change (%)	of U.S. Flock
January	12.2	23.5	11.4	14.1	23.6	37.6	59%	11.8%
April	17.0	26.6	13.5	14.6	30.5	41.2	35%	13.0%
July	17.0	27.5	13.5	14.6	30.5	42.1	38%	13.6%
October	23.5	34.7	14.1	14.7	37.6	49.4	0.3	15.8%

Source: USDA AMS (Monthly USDA Cage-Free Shell Egg Report)

Note: the number of layers represent the last month with data (sometimes the estimate is from a couple of months before).

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EXPORT OF TABLE EGGS IN THE SHELL IN 2017 (Thousand cases- 30 doz) **TABLE 8**

Month \ To	North America	Central America	Caribbean	European Union-28	East Asia	Southeast Asia	Middle East	Total 2017	Total 2016	% of U.S. Production
Jan	29.1	0.4	30.7	0.0	85.5	0.0	44.0	193.1	272.3	0.88
Feb	55.5	0.2	72.7	0.0	90.6	0.0	49.1	273.9	298.0	1.39
Mar	62.2	0.4	35.0	0.1	82.0	0.0	60.3	253.5	409.7	1.16
Apr	96.2	0.3	65.7	0.0	74.7	0.0	24.2	270.7	335.2	1.29
May	100.9	0.5	54.1	0.0	88.4	0.0	21.7	273.6	267.3	1.27
Jun	70.7	0.9	75.3	0.0	71.8	0.0	24.2	252.2	243.6	1.21
Jul	101.5	0.2	23.9	0.0	122.0	0.0	41.1	292.9	283.1	1.36
Aug	137.8	0.7	30.0	0.0	127.4	0.0	40.8	340.9	296.0	1.60
Sep	212.5	0.5	29.5	0.0	112.2	0.0	37.1	396.8	411.0	1.94
Oct									330.6	
Nov									292.7	
Dec									340.2	
9 Mo. Total	866.3	4.1	417.0	0.1	854.6	0.0	342.3	2,547.6	2,816.2	1.35
%	34.0	0.2	16.4	0.0	33.5	0.0	13.4			

Source: USDA Foreign Agric. Service from U.S. Dept. of Commerce, U.S. Census Bureau, Foreign Trade Stats

EXPORT OF EGG PRODUCTS IN 2017 (EQUIVALENT: thousand cases- 30 doz) **TABLE 9**

Month \ To	North America	Central America	Caribbean	European Union-28	East Asia	Southeast Asia	Middle East	Total 2017	Total 2016	% of U.S. Production
Jan	86.1	10.9	9.3	71.8	139.0	2.1	4.6	334.0	169.9	1.52
Feb	77.3	0.7	10.3	106.1	144.9	19.3	9.3	387.5	162.8	1.97
Mar	116.5	0.7	12.3	102.1	233.4	15.4	10.7	501.7	291.3	2.30
Apr	80.7	0.5	11.0	76.1	202.4	19.9	64.3	464.3	233.8	2.22
May	109.6	13.1	11.8	55.2	162.2	23.1	46.4	438.8	221.8	2.04
Jun	113.9	7.1	6.2	45.2	212.1	16.0	7.5	421.3	244.5	2.03
Jul	103.8	6.9	7.8	27.1	180.1	11.0	13.2	363.9	236.7	1.69
Aug	137.0	11.9	12.1	44.7	206.6	22.8	7.7	465.2	286.9	2.18
Sep	115.6	8.5	9.3	56.8	206.7	14.3	10.7	434.7	355.1	2.12
Oct									366.9	
Nov									400.9	
Dec									409.1	
9 Mo. Total	940.5	60.4	90.1	585.3	1,687.3	143.8	174.3	3,811.3	2,202.7	2.01
%	24.7	1.6	2.4	15.4	44.3	3.8	4.6			

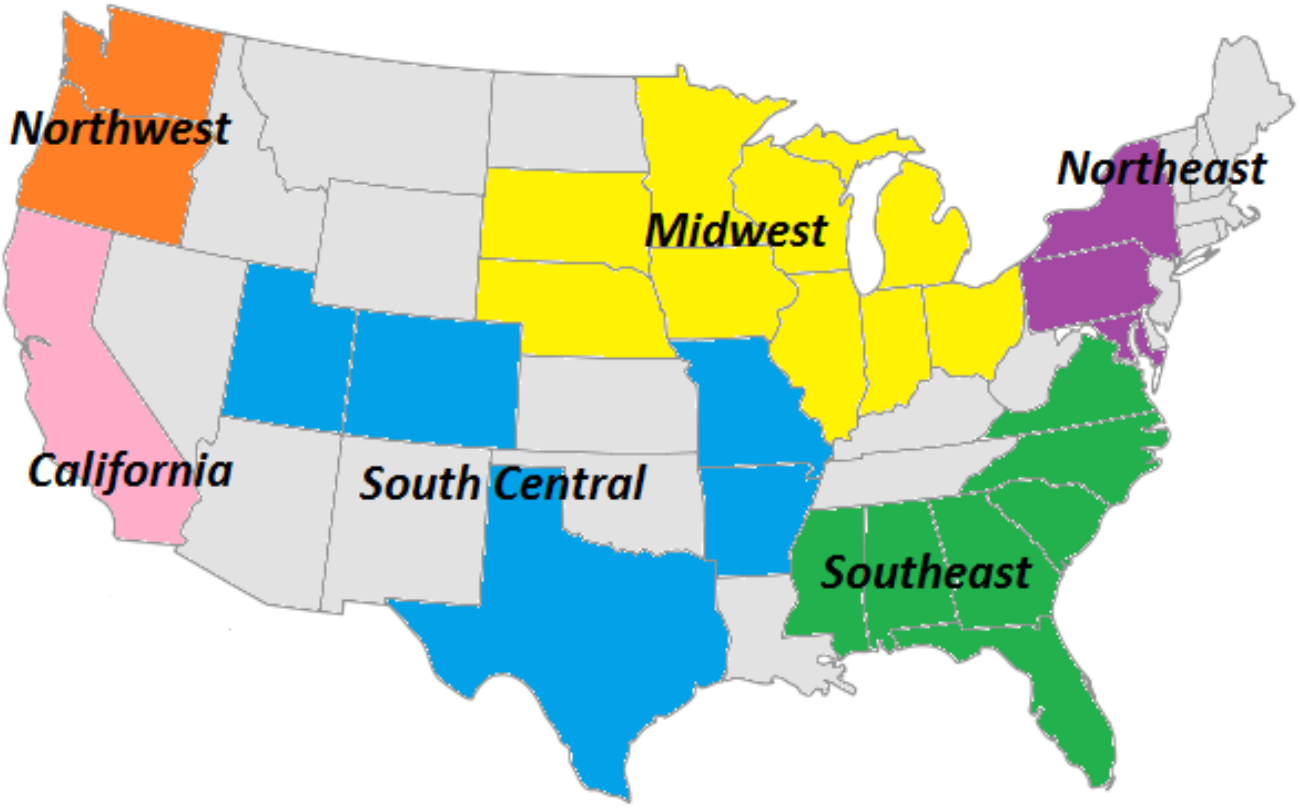
Note: Information has been converted from metric tonnes at a rate of 42 lbs. per case of liquid egg (edible + inedibles).
Source: USDA Economic Research Service from U.S. Dept. of Commerce, U.S. Census Bureau, Foreign Trade Stats.

TOTAL EGGS EXPORTED - 2017 **TABLE 10**

	Table Eggs Produced	Shell Eggs Exported		Egg Products Exported		Total Exported	
	(000) Cases	(000) Cases	% of U.S.	(000) Cases	% of U.S.	(000) Cases	% of U.S.
Jan	21,954	193.1	0.88	334.0	1.52	527.1	2.40
Feb	19,666	273.9	1.39	387.5	1.97	661.4	3.36
Mar	21,783	253.5	1.16	501.7	2.30	755.2	3.47
Apr	20,961	270.7	1.29	464.3	2.22	735.0	3.51
May	21,475	273.6	1.27	438.8	2.04	712.3	3.32
Jun	20,766	252.2	1.21	421.3	2.03	673.5	3.24
Jul	21,473	292.9	1.36	363.9	1.69	656.8	3.06
Aug	21,351	340.9	1.60	465.2	2.18	806.1	3.78
Sep	20,481	396.8	1.94	434.7	2.12	831.5	4.06
Oct							
Nov							
Dec							
Total/Av	189,909	2,547.6	1.34	3,811.3	2.01	6,358.8	3.35

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Map of U.S. Regions, as defined by Urner Barry, and the location of information used in this



Notes

The grey shaded States are the ones where there is no data available about the layers in flocks with 30,000 or more hens.
Northwest is the sum of OR and WA
South Central is the sum of AR, UT, CO, MO and TX
Northeast is the sum of MD, NY and PA
Southeast is the sum of AL, FL, GA, MS, NC, SC and VA
Midwest is the sum of IA, IL, IN, MI, MN, NE, OH, WI, and SD
California is the state of California only

TABLE EGG LAYERS IN FLOCKS OF 30,000 AND ABOVE BY REGION (Million) - 2017 **TABLE 11**

month	Northeast	Southeast	South Central	Midwest	Northwest	California	U.S. Total
Jan	33.3	31.4	38.1	161.4	9.4	11.7	308.7
Feb	33.3	31.1	38.0	160.9	9.2	11.6	307.4
Mar	33.4	30.8	37.8	160.4	9.1	11.7	306.7
Apr	33.6	30.4	37.3	159.7	9.1	11.8	305.5
May	33.6	29.6	36.8	158.7	9.1	11.6	302.9
Jun	33.4	29.4	36.4	158.3	9.0	11.4	301.4
Jul	33.2	29.5	36.2	158.4	8.9	11.4	301.1
Aug	33.0	29.8	36.5	158.7	9.1	11.4	301.9
Sep	33.0	30.0	36.6	159.1	9.2	11.5	302.8
Oct							
Nov							
Dec							
9 Month Avg.	33.3	30.2	37.1	159.5	9.1	11.6	304.3
% of total	11.0	9.9	12.2	52.4	3.0	3.8	

Source: USDA NASS Chickens and Eggs

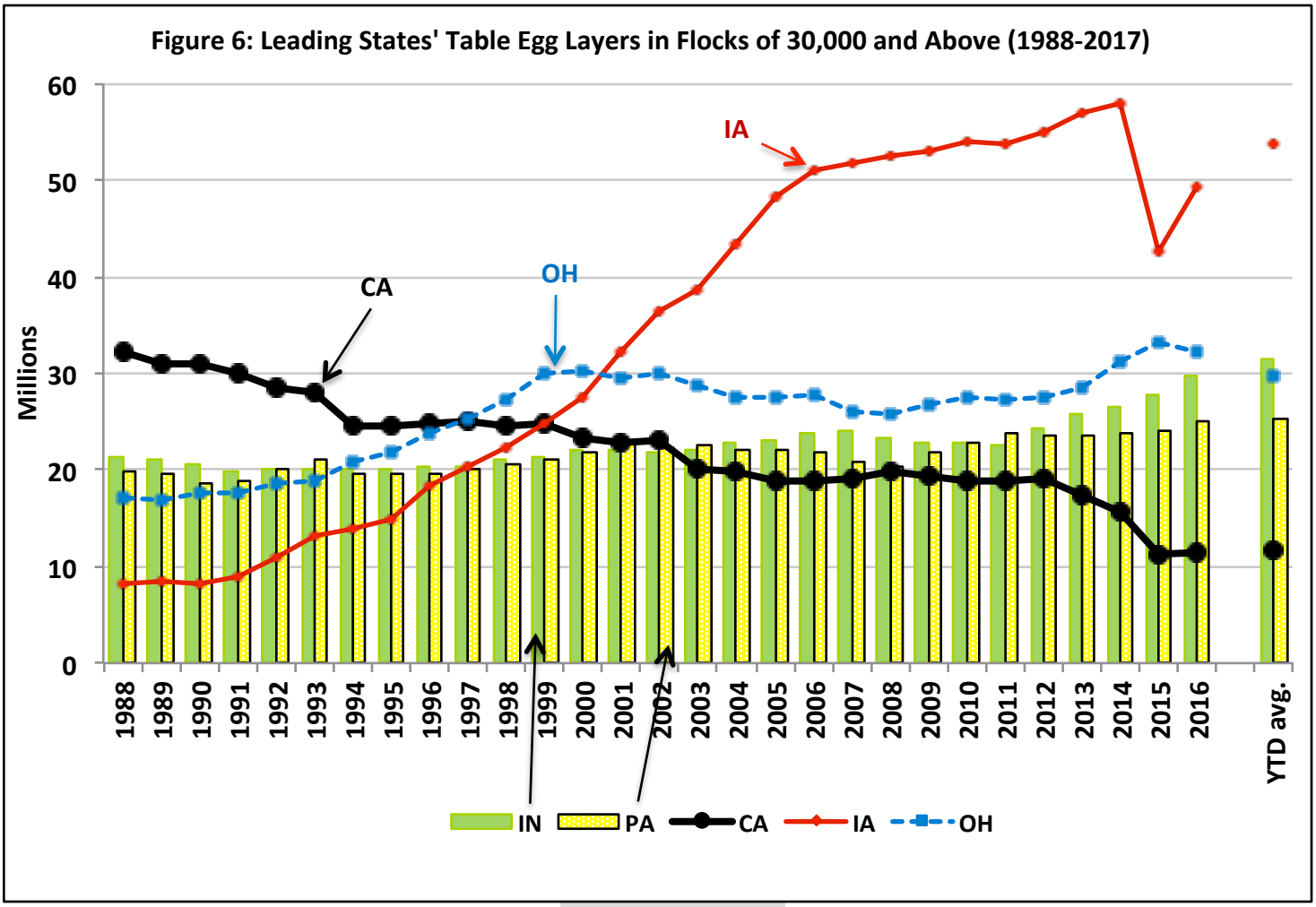
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TABLE EGG LAYERS IN LEADING STATES - (LAYERS IN 30,000+ HEN FLOCKS) - 2017 **TABLE 12**

month	IA	OH	IN	PA	CA	TX	U.S.
Sep-2016	51.91	31.90	29.77	24.51	11.24	16.18	302.17
			(Millions)				
Jan-2017	54.21	30.17	31.61	25.40	11.70	17.09	308.69
Feb-2017	54.39	29.74	31.40	25.20	11.60	17.30	307.39
Mar-2017	54.05	29.72	31.65	25.38	11.66	17.45	306.73
Apr-2017	53.41	29.67	31.97	25.67	11.82	17.33	305.50
May-2017	53.04	29.27	31.62	25.70	11.65	17.02	302.90
Jun-2017	53.42	29.17	31.27	25.43	11.36	16.94	301.38
Jul-2017	53.47	29.61	31.28	25.30	11.41	17.08	301.13
Aug-2017	53.68	29.92	31.49	25.18	11.40	17.29	301.88
Sep-2017	53.85	29.98	31.68	25.30	11.50	17.45	302.76
Oct-2017							
Nov-2017							
Dec-2017							
9 Month Avg.	**53.72**	**29.69**	**31.55**	**25.40**	**11.57**	**17.22**	**304.26**

Source: USDA NASS Chickens and Eggs

% of all U.S. table egg layers in flocks with 30,000 or more hens =	**97.0%**

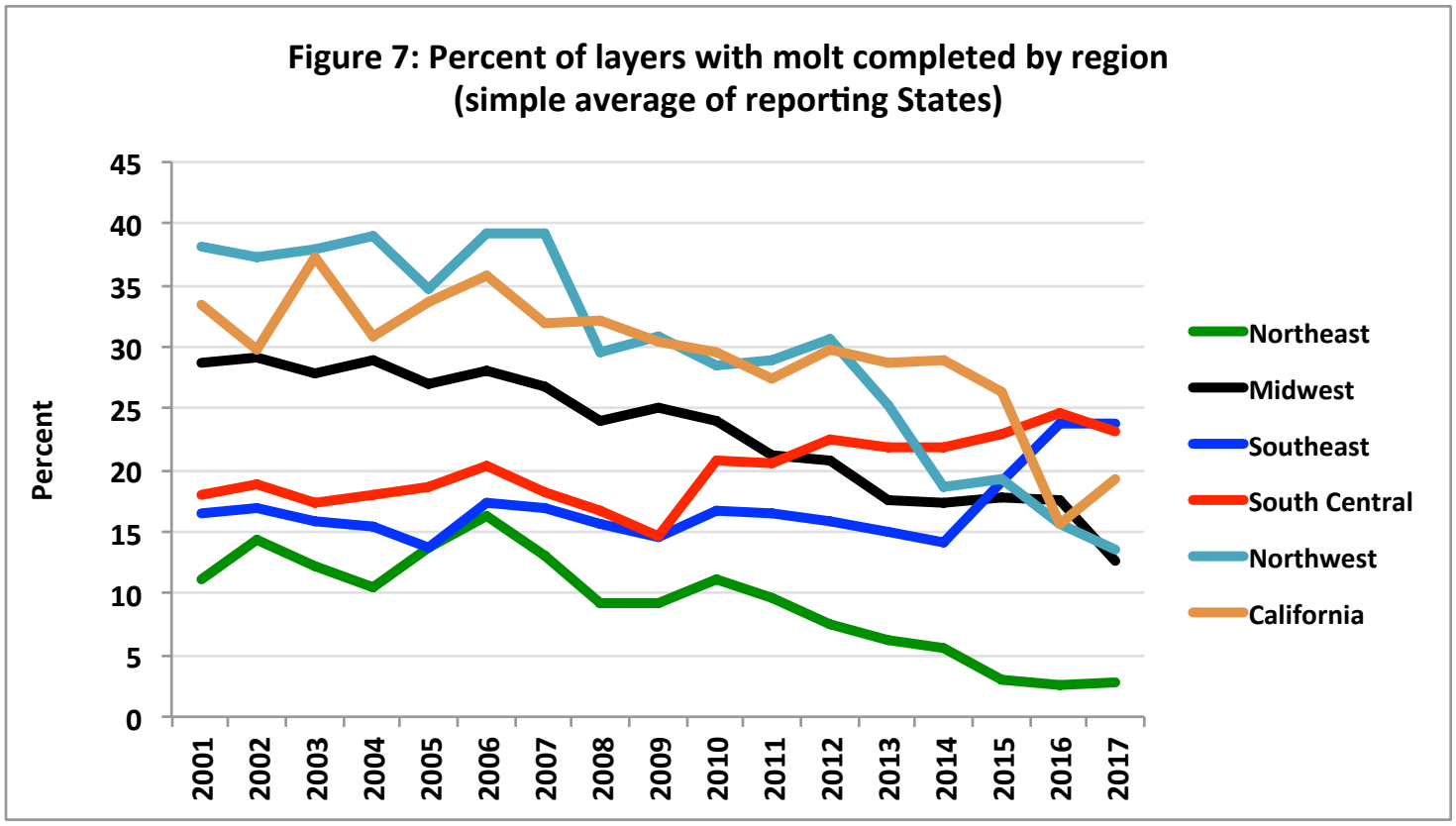


TOTAL MOLT (in-molt plus post-molt) BY REGION (Simple average of reporting States, %) - 201_ **TABLE 13**

month	Northeast	Southeast	South Central	Midwest	Northwest	California	U.S. Avg
Jan	3.2	26.7	24.6	11.6	14.0	18.5	17.2
Feb	3.2	25.6	23.7	12.3	15.3	19.0	17.5
Mar	2.8	24.9	23.5	12.4	17.0	20.0	17.7
Apr	2.5	23.4	23.4	12.1	15.8	17.0	17.3
May	2.3	24.2	23.7	11.4	14.0	19.0	17.7
Jun	2.2	23.8	24.3	10.8	13.0	20.5	17.4
Jul	2.5	24.4	23.6	11.3	11.3	19.5	17.7
Aug	2.5	23.6	23.2	12.3	10.8	19.5	18.0
Sep	3.7	21.6	21.1	15.8	11.3	21.0	18.8
Oct	3.5	19.3	20.1	16.2	13.3	19.5	18.8
Nov							
Dec							
10 Month Avg.	**2.8**	**23.7**	**23.1**	**12.6**	**13.6**	**19.4**	**17.8**
year 2016 avg.	3.2	26.5	27.2	20.2	18.8	18.5	20.8

Source: USDA NASS Chickens and Eggs

Note: average molt is estimated as the simple average of the reported States



PROJECTED U.S. EGG-TYPE HATCHERY SUPPLY FLOCK (Millions) **TABLE 14**

month	2012	2013	2014	2015	2016	2017	2018
Jan	2.657	2.579	2.540	2.682	3.081	2.480	2.741
Feb	2.672	2.613	2.536	2.689	3.074	2.497	2.768
Mar	2.731	2.630	2.472	2.605	2.997	2.641	2.604
Apr	2.732	2.588	2.530	2.718	2.840	2.604	2.613
May	2.819	2.515	2.497	2.917	2.805	2.598	
Jun	2.778	2.537	2.439	2.892	2.866	2.646	
Jul	2.791	2.436	2.608	2.797	2.836	2.595	
Aug	2.830	2.515	2.535	2.797	2.725	2.663	
Sep	2.825	2.503	2.553	2.857	2.615	2.654	
Oct	2.786	2.468	2.610	2.958	2.446	2.681	
Nov	2.649	2.555	2.619	2.937	2.465	2.685	
Dec	2.745	2.476	2.664	2.947	2.549	2.659	
4 month avg.	2.698	2.602	2.519	2.674	2.998	2.555	2.682
12 month avg.	2.751	2.535	2.550	2.816	2.775	2.617	

Source: USDA NASS Chickens and Eggs

Note: The hatchery supply flock estimates are made by using 7 to 18 months prior hatch minus 9% mortality

PULLETS TO BE HOUSED BASED UPON U.S. HATCH 5 MONTH AGO (Millions) **TABLE 15**

(47.5% of CHICKS PLACED multiplied by a 95% LIVABILITY FACTOR)

month	2013	2014	2015	2016	2017	2018	2013 to '17 month avg.
Jan	19.1	17.5	17.9	21.3	19.5	20.5	19.1
Feb	16.1	17.8	18.4	21.5	18.9	17.8	18.5
Mar	17.1	19.2	20.2	22.7	19.6		19.7
Apr	16.5	18.9	16.5	20.7	18.8		18.3
May	18.5	18.6	18.2	21.1	20.6		19.4
Jun	19.1	19.4	18.0	20.9	19.6		19.4
Jul	21.1	20.6	20.7	27.1	24.2		22.7
Aug	19.7	20.2	21.4	25.7	25.0		22.4
Sep	20.8	20.9	21.4	23.1	23.5		22.0
Oct	22.6	22.4	21.8	25.9	23.9		23.3
Nov	19.1	20.0	21.3	26.0	22.0		21.7
Dec	18.0	19.2	19.3	18.8	18.7		18.8
2 month avg.	17.6	17.6	18.2	21.4	19.2	19.1	18.8
Annual Avg.	19.0	19.5	19.6	22.9	21.2		20.4
Total	227.7	234.6	235.1	274.7	254.4		245.3

Source: USDA NASS Chickens and Eggs % Change to date -0.38

Note: The number of pullets to be housed was reduced by 6 million based on the number reported as lost to avian influenza. We assumed the reduction as evenly spread during the period between May and September 2015 (assuming that the ages of affected birds was evenly distributed).

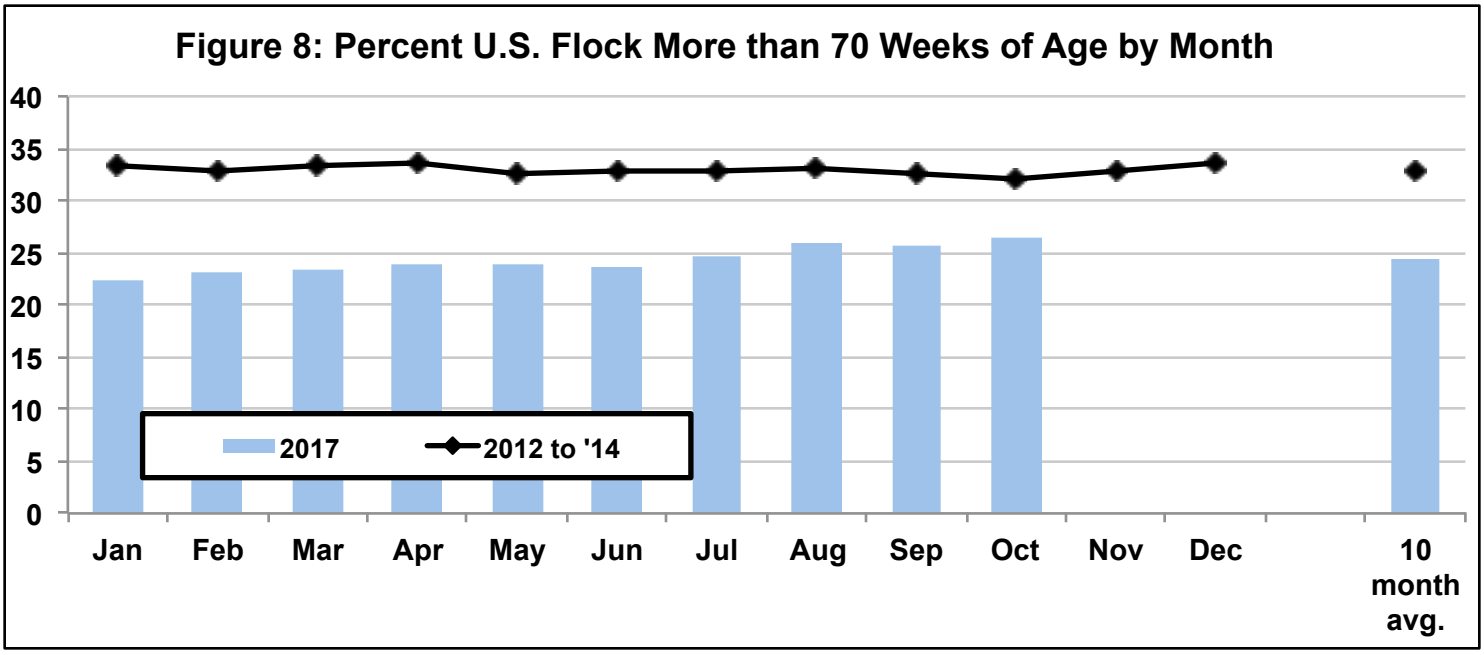


PROJECTED U.S. TABLE EGG FLOCK MORE THAN 70 WEEKS OF AGE (% of layers) **TABLE 16**

	% of National Flock over 70 weeks of age (on the 1st of the month)						
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2012 to '14**
Jan	32.7	34.1	33.1	32.2		22.4	33.3
Feb	32.7	34.1	31.8	31.1		23.0	32.9
Mar	33.0	34.9	31.8	32.0		23.4	33.3
Apr	33.4	34.9	32.5			23.8	33.6
May	32.4	33.5	32.2			23.8	32.7
Jun	32.8	33.8	32.2			23.6	33.0
Jul	32.5	33.7	32.4			24.7	32.9
Aug	32.5	33.7	33.4			26.0	33.2
Sep	32.3	32.7	32.5			25.7	32.5
Oct	32.5	31.4	32.1			26.6	32.0
Nov	34.4	32.6	31.5		22.7		32.9
Dec	34.9	33.2	32.8		21.8		33.6
10 month avg.	32.7	33.7	32.4			24.3	32.9
12 month avg.	33.0	33.6	32.4				33.0

Source: Egg Industry Center based on USDA NASS Chickens and Eggs data

Note: The number of layers younger than 70 weeks of age are estimated as the sum of the Egg-Type Chicks Hatched between 6 and 16 months before adjusted by a 47.5% of CHICKS PLACED multiplied by a 95% LIVABILITY FACTOR for pullets and a 98% average LIVABILITY FACTOR FOR LAYERS between 20 and 70 weeks of age.



FLOCK SIZE PROJECTION

The U.S. flock size is projected for the current year and the following year for each month. Projections start with the first of the month official USDA count and are then adjusted monthly. Adjustments are made considering the most recent:

1. Hatch data (projected 5-months into the future with mortality). Subsequent pullets added are estimated using the linear regression listed below for each month.

   Added /Beginning ratio estimated as: 0.06485 + 0.00447 * Price 12-18_ Jan + 0.00263 * Price 12-18_ Feb + 0.00539 * Price 12-18_ Mar + 0.00211 * Price 12-18_ Apr + 0.0051 * Price 12-18_ May + 0.00731 * Price 12-18_ Jun + 0.01306 * Price 12-18_ Jul + 0.01388 * Price 12-18_ Aug + 0.01266 * Price 12-18_ Sep + 0.01361 * Price 12-18_ Oct + 0.00939 * Price 12-18_ Nov + 0.00256 * Price 12-18_ Dec + 0.00853 * "Post Shock HPAI 6-12 mo" - 0.00045 * "MOLT - previous 12-mo"

   … where **"**Egg Price 12-18 mo earlier" is the average price of Midwest Large eggs for the months 12 to 18 before the month we are trying to project

   … where "Post Shock HPAI 6-12 mo" is a dummy variable to account for the higher than normal replacement rate observed 6 to 12 months after the HAPI outbreak

   … where "MOLT - previous 12-mo" is the previous 12 months average of the percentage of layers molted

   Adjusted R^2=0.78

2. All birds coming out of production by any reason are included in the "Slaughter, Died and Missing" category. This is estimated as Beginning count + Added - Ending count. Subsequent layers coming out of production are estimated using the linear regression listed below for each month.

   Slaughter, Died & Missing/Beginning ratio estimated as: 0.02855 + 0.50512 * Added /Beg. count + 0.00446 * Jan - 0.00313 * Feb + 0.00129 * Mar + 0.00766 * Apr + 0.00457 * May + 0.00278 * Jun + 0.0029 * Jul - 0.00163 * Aug - 0.00076 * Sep - 0.00207 * Oct - 0.00935 * Nov + 0.01546 * Shock _ Apr + 0.07849 * Shock _ May + 0.02372 * Shock _ Sep + 0.00306 * "CPI adjusted Shell $ under 0.65"

   … where "Added /Beg. count " is the ratio between the pullets added and the beginning flock count for the month we are trying to project

   … where "Shock_Apr" and "Shock_May" are dummy variables to capture the losses experienced in April and May 2015 as a result of HPAI outbreak.

   … where "Shock_Sep" is a dummy variable to capture the losses experienced after the year 2010 SE recall

   … where "CPI adjusted Shell $ under 0.65" is a dummy variable that takes the value 1 if the Midwest Large White egg price adjusted by CPI is under 65 cents/dozen (equal to almost 84 cents in January 2017). CPI is the consumer price index of all food and beverages with base on the year 2005.

   Adjusted R^2=0.76

First of the Month Projection Estimates of U.S. Table Egg Layers (millions) **TABLE 17**

Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Projected	Projected
2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
318.6	317.6	316.0	316.3	313.5	311.1	310.4	310.6	311.9	312.4	316.0	319.8

Project. Year end: **Dec, 2017 - 320.0**

Note: Actual values source = Chickens and Eggs Report - USDA NASS

The large number of chicks hatched between February and June 2017 has resulted in a large number of pullets added to the U.S. laying flock between July and November 2017. Historically, this is a time of year where the flock grows and these hatch numbers have resulted in a projected growth of the flock inventory by the end of the year. However, the July-September 2017 culling rates have been much higher than the ten-year historical average. This is resulting in a lower than expected flock growth. If the larger than average culling rates continue, we will see persistent higher uncertainty in the flock projection.

The flock projection model was adjusted after the change of historical values reported by USDA NASS.

Date calculated: 11/1/2017

2017 Bird Flow by Month

Table 18

	ACTUAL FLOCK (million birds)			
month	Beginning Count	Pullets added [1]	Slaughter, Died & Missing	Ending count
Jan-17	318.6	19.5	20.5	317.6
Feb-17	317.6	18.9	20.5	316.0
Mar-17	316.0	19.6	19.3	316.3
Apr-17	316.3	18.8	21.5	313.5
May-17	313.5	20.6	23.0	311.1
Jun-17	311.1	19.6	20.3	310.4
Jul-17	310.4	24.2	24.0	310.6
Aug-17	310.6	25.0	23.7	311.9
Sep-17	311.9	23.5	23.0	312.4
Oct-17	312.4	23.9		
Nov-17		22.0		
Dec-17		18.7		
Jan-18		20.5		
Feb-18		17.8		
Mar-18				
Apr-18				
May-18				
Jun-18				
Jul-18				
Aug-18				
Sep-18				
Oct-18				
Nov-18				
Dec-18				

[1] at 5 months of age

Table 19

	PROJECTED FLOCK (million birds)			
month	Beginning Count	Pullets added [1]	Slaughter, Died & Missing	Ending count
Jan-17	318.6	19.5	20.5	317.6
Feb-17	317.6	18.9	20.5	316.0
Mar-17	316.0	19.6	19.3	316.3
Apr-17	316.3	18.8	21.5	313.5
May-17	313.5	20.6	23.0	311.1
Jun-17	311.1	19.6	20.3	310.4
Jul-17	310.4	24.2	24.0	310.6
Aug-17	310.6	25.0	23.7	311.9
Sep-17	311.9	23.5	23.0	312.4
Oct-17	312.4	23.9	20.4	316.0
Nov-17	316.0	22.0	18.2	319.8
Dec-17	319.8	18.7	18.6	320.0
Jan-18	320.0	20.5	20.9	319.6
Feb-18	319.6	17.8	18.1	319.3
Mar-18	319.3	19.6	19.4	319.4
Apr-18	319.4	18.7	22.0	316.1
May-18	316.1	19.4	21.2	314.3
Jun-18	314.3	19.7	20.8	313.2
Jul-18	313.2	21.1	20.5	313.8
Aug-18	313.8	21.5	19.3	316.0
Sep-18	316.0			
Oct-18				
Nov-18				
Dec-18				

[1] at 5 months of age

Actual number

The large number of chicks hatched between February and June 2017 has resulted in a large number of pullets added to the U.S. laying flock between July and November 2017. Historically, this is a time of year where the flock grows and these hatch numbers have resulted in a projected growth of the flock inventory by the end of the year. However, the July-September 2017 culling rates have been much higher than the ten-year historical average. This is resulting in a lower than expected flock growth. If the larger than average culling rates continue, we will see persistent higher uncertainty in the flock projection.

2017 U.S. Flock Size: EIC Projections and USDA Reported Numbers

Table 20

EIC projected	**USDA preliminary**	**USDA actual count**

For October 2017

Number of U.S. table egg layers (million) on the 1st of each month

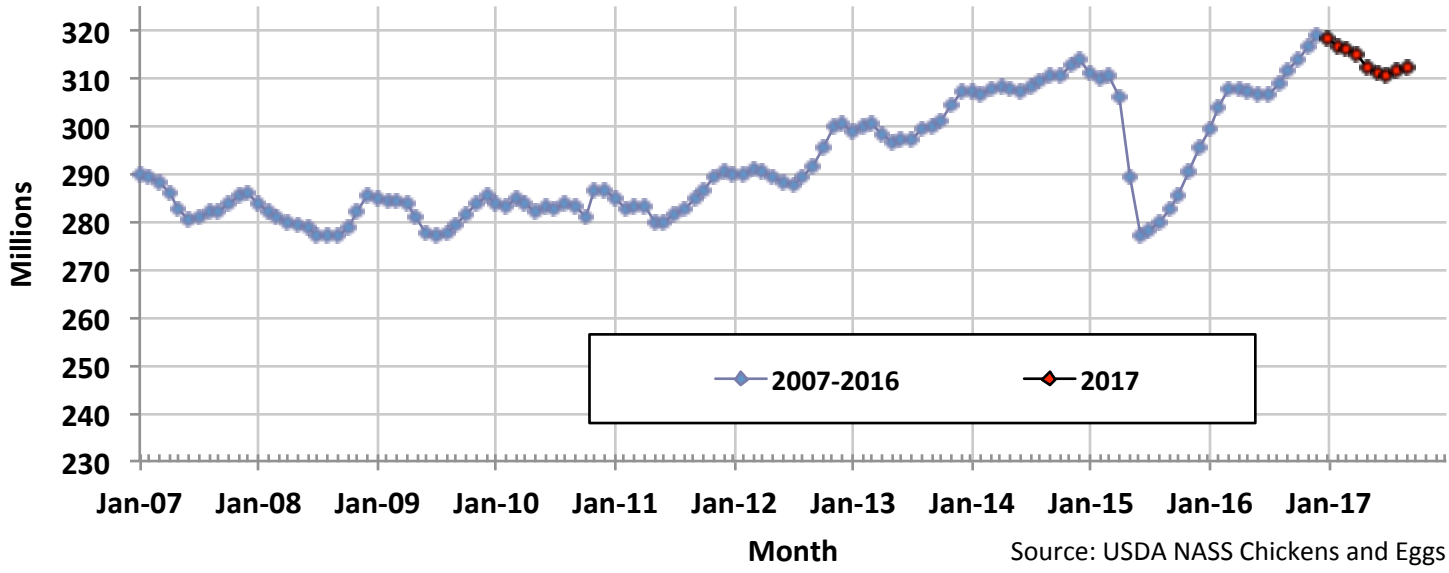
Month & Year	Month when the Layer Number was Reported by USDA (highlighted) or Projected by EIC											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Jan-17	**314.0**	**318.6**										
Feb-17	313.4	**318.1**	**317.6**									
Mar-17	314.9	318.6	**316.5**	**316.0**								
Apr-17	315.3	318.0	315.9	**316.3**	**316.3**							
May-17	312.3	314.9	313.0	313.4	**313.5**	**313.5**						
Jun-17	311.2	313.7	311.8	312.2	312.3	**311.2**	**311.1**					
Jul-17	309.7	312.3	310.8	311.2	311.3	310.2	**310.2**	**310.4**				
Aug-17	308.8	311.9	312.0	312.4	312.5	311.5	312.4	**311.1**	**310.6**			
Sep-17	310.2	312.9	312.9	315.5	315.7	315.5	315.4	315.1	**312.1**	**311.9**		
Oct-17	311.0	313.3	313.3	315.9	317.4	317.4	317.3	317.0	315.0	**312.4**		
Nov-17	312.6	314.2	314.2	316.8	318.3	319.8	319.8	319.5	317.6	316.0		
Dec-17	316.0	317.8	317.8	320.5	322.0	323.5	323.6	323.3	321.4	319.8		
Jan-18		317.8	317.7	320.4	321.9	323.5	323.5	323.4	321.5	320.0		
Feb-18			315.6	318.2	320.7	322.3	322.3	322.4	321.1	319.6		
Mar-18				318.2	320.7	323.2	322.3	322.6	321.3	319.3		
Apr-18					320.7	323.2	321.3	321.8	321.4	319.4		
May-18						319.6	317.7	318.5	318.1	316.1		
Jun-18							315.6	316.6	316.3	314.3		
Jul-18								315.5	315.2	313.2		
Aug-18									315.8	313.8		
Sep-18										316.0		
Oct-18												
Nov-18												
Dec-18												

THIS PAGE HELPS VISUALIZE CHANGES IN FLOCK PROJECTIONS AS THE YEAR EVOLVES

Note: the January projections were made before the USDA Chickens and Eggs Report figures were adjusted.



Figure 9: U.S. Monthly Table-Egg Layers (2007-2017)



Source: USDA NASS Chickens and Eggs

Figure 10: U.S. Table Eggs per Hundred Hens per Day by Month (2007-2017)

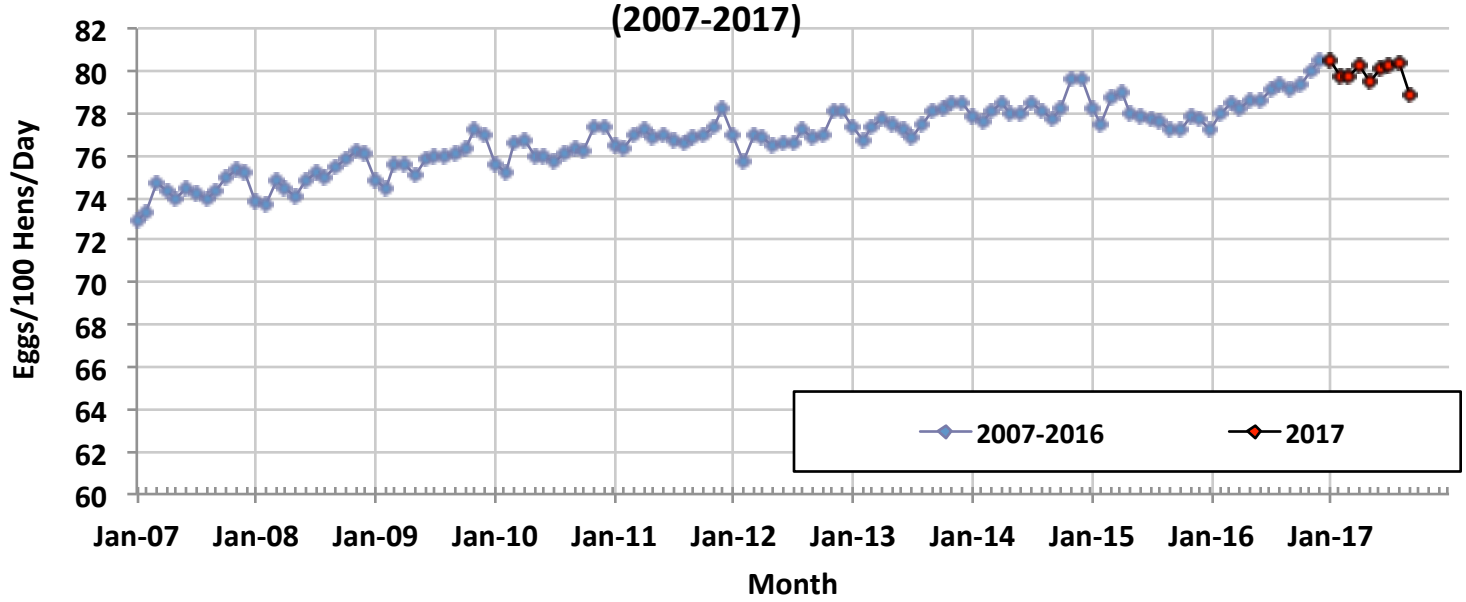
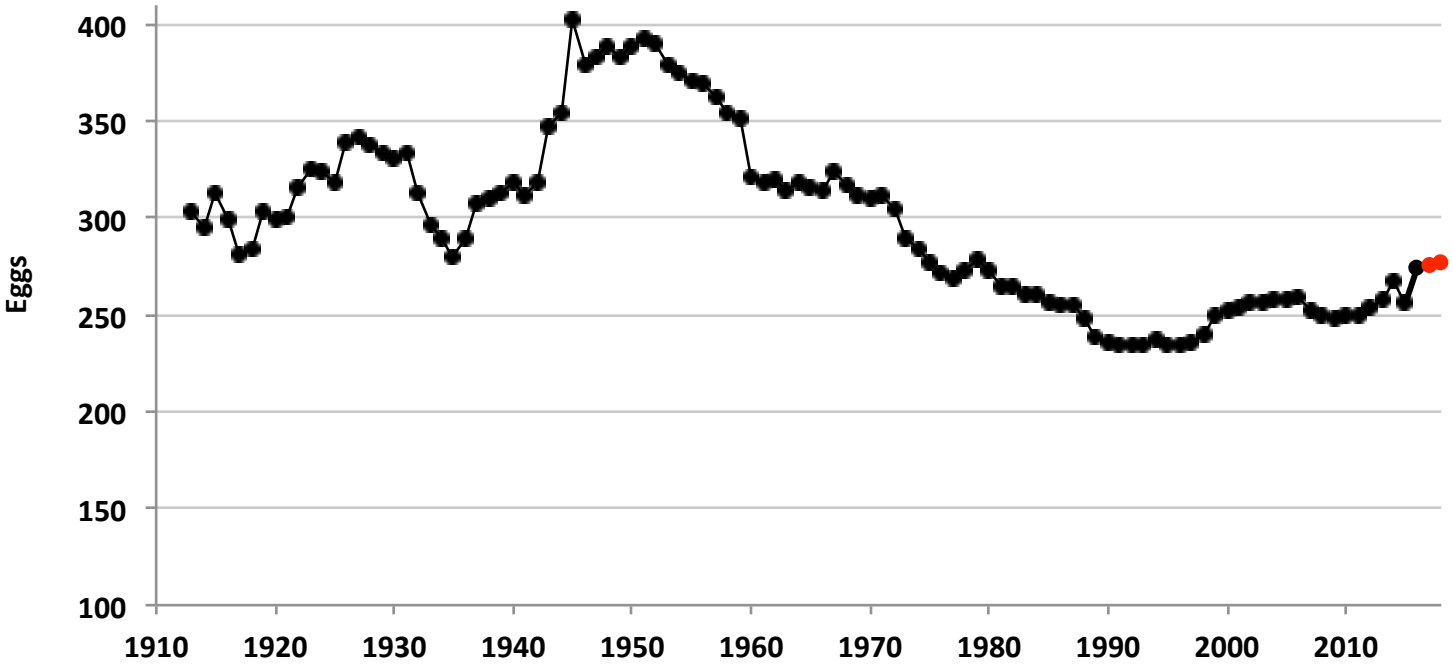


Figure 11: Monthly Percent of U.S. Flock Molted (2007-2017)



Source: USDA NASS Chickens and Eggs

Figure 12: U.S. Per Capita Egg Consumption by Year (1913-2018)



Source: USDA ERS

SUMMARY TO DATE **Table 21**

			2016	2017	% Change
HATCH of EGG-TYPE STRAIGHT RUN (THOUSANDS) (U.S.)	**(Total)**	**Jan to Sep**	50,557	47,984	-5.1
TABLE-EGG LAYERS (MILLIONS) (U.S.)	**(Avg.)**	**Jan to Sep**	306.5	313.7	2.3
TABLE EGGS (MILLIONS/MONTH) (U.S.)	**(Avg.)**	**Jan to Sep**	7,328	7,596	3.7
RATE OF LAY (%)	**(Avg.)**	**Jan to Sep**	78.4	79.9	1.5
U.S. TABLE EGG AVG. CASES/WEEK (THOUSANDS)		**Jan to Sep**	1,691	1,753	3.7
AVG MONTHLY CASES OF EGGS BROKEN (MILLION) (U.S.)		**Jan to Sep**	6.307	6.413	1.7
			2016	**2017**	**Difference**
PERCENT OF U.S. FLOCK IN or POST MOLT	**(Avg.)**	**Jan to Oct**	21.2	17.8	-3.4
AVERAGE PULLETS ADDED/MONTH (MILLIONS) (U.S.)		**Jan to Feb 18**	19.2	19.1	-0.1

Note: U.S. cost of production and egg prices are published in another Egg Industry Center report. Contact Maro Ibarburu at maro@iastate.edu to be placed on the mailing list to receive monthly copies of these reports.

Webpages of some of the sources of information,
Access these sites by clicking on the blue addresses below:

USDA NASS Chickens and Eggs	http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1028
USDA NASS Poultry Slaughter	http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1131
USDA NASS Egg Products	http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1057
USDA ERS Livestock and Meat Trade Data.	http://www.ers.usda.gov/data/MeatTrade/BroilerTurkeyMonthly.htm
USDA FAS	http://www.fas.usda.gov/gats/ExpressQuery1.aspx
USDA NASS Cold Storage	http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1034
USDA AMS Poultry Market News and Analysis	http://marketnews.usda.gov/portal/py
USDA AMS Monthly USDA Cage-Free Shell Egg Repor	https://www.ams.usda.gov/mnreports/pymcagefree.pdf

Maro Ibarburu, EIC Business Analyst
Iowa State University, Ames, IA
Phone (515) 294-8132
E-mail: maro@iastate.edu

