U.S. Flock Trends and Projections

April 5, 2017

Compiled by

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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 February hatch (straight-run chicks) was 4.5% lower than in 2016. This projects forward to a 24.1 million pullet placement for July of 2017 which is 0.3 million smaller than July of 2016 placement (24.4).

* Current (February average, 2017) U.S. table egg layer number (317.1 million) is 4.3 percent larger than last year's number at this time (304.0 million), and down 1.0 million compared to last month (318.1 million).

* In January, Iowa led the nation with 54.4 million laying hens compared to 31.4 million in Indiana, 29.7 million in Ohio, and 25.2 million in Pennsylvania. California (with 11.6 million layers) lost it's 5th position to Texas with 17.3 million layers.

* The February U.S. rate of lay was estimated to be 79.8% which is 1.8% higher than February 2016 level. The total number of table eggs produced in February 2017 was 2.9% higher than the February 2016 production.

* The February 2017 number of eggs exported was 44% higher than last year (February 2016) and 25% higher than last month (January 2017). The February exports represented 3.4% of the number of eggs produced.

* Shell eggs broken for products in February 2017 totaled 6.192 million cases, 12.9% more than in February 2016 (5.484 million cases).

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

	2016	2017	% Change
Hatch - Egg-Type Straight Run (thousands) (U.S.)	50,481	48,206	-4.5
Table Egg Layers (millions) (U.S.)	304.0	317.1	4.3
Rate of lay (percent)	78.0	79.8	1.8
Molting (March 1, 2017) (percent in + out of a molt)	22.1	17.4	-21.3

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	317.7*

* estimated value

SPECIAL NOTE:

USDA NASS made some adjustments to their final estimates. Therefore some of the figures are different than in previous reports.
Also, data for the previous month may be changed by the USDA to reflect updates following late submissions by responders.
We made some modifications to existing tables and figures, including replacing some of them.

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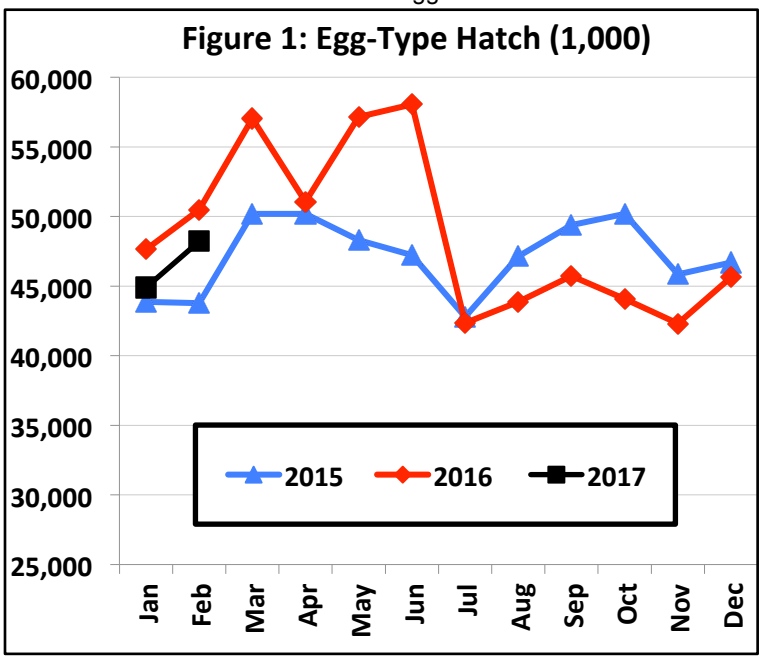
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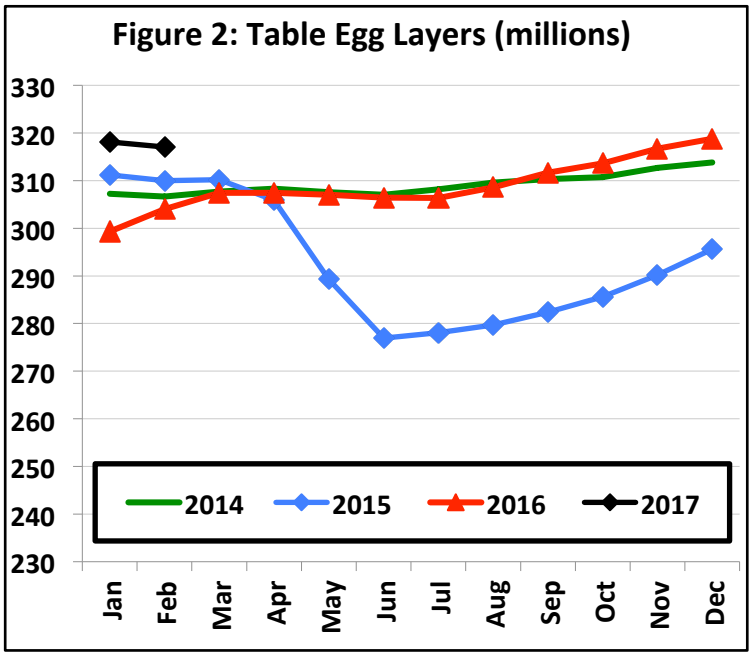
Egg Industry Center

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	47,981	39,741	-17.2	Jan	43,868	47,645	44,906	-5.7
Feb	47,942	48,152	0.4	Feb	43,774	50,481	48,206	-4.5
Mar	50,402	51,501	2.2	Mar	50,187	57,037		
Apr	50,861			Apr	50,193	51,052		
May	53,478			May	48,315	57,155		
Jun	54,579			Jun	47,212	58,040		
Jul	44,940			Jul	42,790	42,349		
Aug	38,355			Aug	47,131	43,870		
Sep	43,558			Sep	49,391	45,724		
Oct	40,676			Oct	50,194	44,071		
Nov	41,682			Nov	45,848	42,313		
Dec	45,960			Dec	46,695	45,633		
YTD Avg.	48,775	46,465	-4.7	**YTD Avg.**	43,821	49,063	46,556	-5.1
YTD Total	146,325	139,394		**YTD Total**	87,642	98,126	93,112	
12 Month Total	560,591			**12 Month Total**	565,598	585,370		

Source: USDA NASS Chickens and Eggs





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

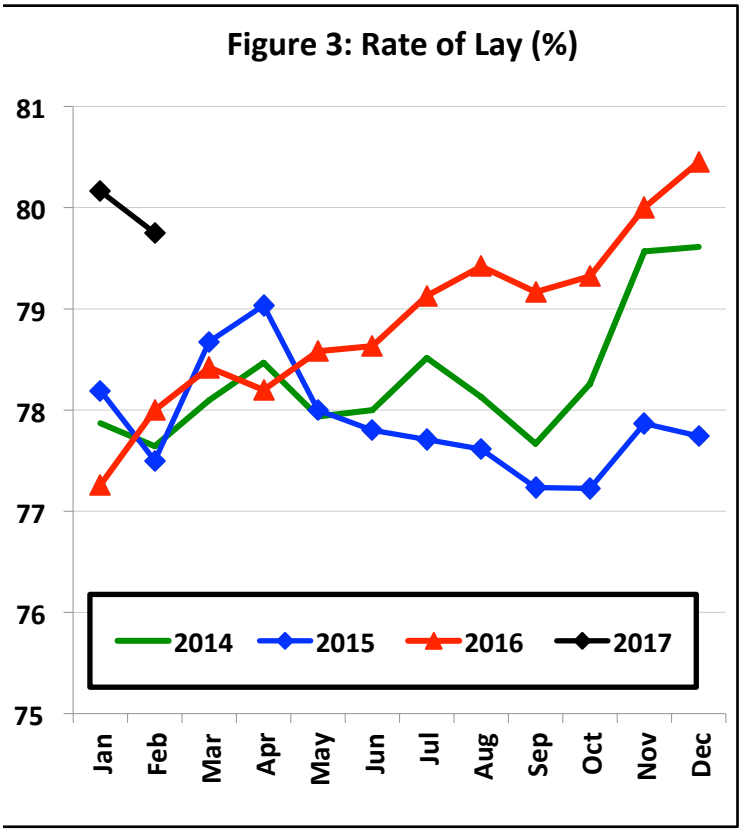
	TOTAL Table Egg Layers						% Change with respect to	
month	2012	2013	2014	2015	2016	2017	last year	2012-2016
Jan	289.6	298.7	307.2	311.2	299.3	318.1	6.3	5.6
Feb	289.7	299.7	306.7	310.0	304.0	317.1	4.3	5.0
Mar	290.7	300.4	307.7	310.2	307.4			
Apr	290.2	298.1	308.3	305.9	307.4			
May	289.2	296.6	307.6	289.3	307.0			
Jun	288.3	296.9	307.0	276.9	306.5			
Jul	287.7	297.4	308.2	278.1	306.4			
Aug	289.3	299.4	309.6	279.7	308.6			
Sep	291.8	300.1	310.4	282.4	311.7			
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			
YTD Avg.	289.7	299.2	306.9	310.6	301.7	317.6	5.3	5.3
Annual Avg.	291.8	300.0	309.2	292.9	309.0			

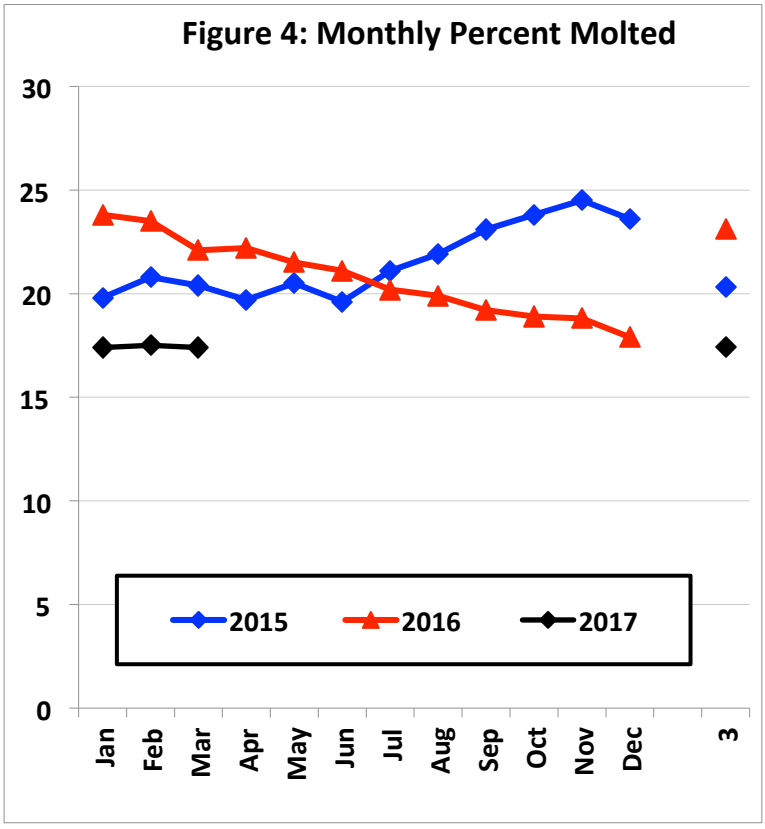
Source: USDA NASS Chickens and Eggs

U.S. TABLE EGGS AND RATE OF LAY (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	80.2
Feb	6,437	6,667	6,726	6,878	7,081	2.9	78.0	79.8
Mar	7,198	7,449	7,566	7,475			78.4	
Apr	6,954	7,256	7,252	7,213			78.2	
May	7,124	7,433	6,996	7,479			78.6	
Jun	6,878	7,185	6,464	7,228			78.6	
Jul	7,085	7,501	6,698	7,514			79.1	
Aug	7,186	7,497	6,729	7,597			79.4	
Sep	7,028	7,230	6,544	7,402			79.2	
Oct	7,300	7,539	6,837	7,712			79.3	
Nov	7,172	7,465	6,778	7,602			80.0	
Dec	7,471	7,746	7,125	7,950			80.5	
YTDAvg.	6,799	7,042	7,135	7,023	7,492	6.7	77.6	80.0
Annual Avg.	7,083	7,365	6,938	7,435			78.9	
Total	84,993	88,385	83,260	89,219				

Source: USDA NASS Chickens and Eggs





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	2.1	20.6	15.3	20.4	22.1	17.4	-4.7
Apr	3.0		19.2		19.7	22.2		
May	2.8		18.7		20.5	21.5		
Jun	2.9		18.2		19.6	21.1		
Jul	2.6		17.6		21.1	20.2		
Aug	2.6		17.3		21.9	19.9		
Sep	2.7		16.5		23.1	19.2		
Oct	2.1		16.8		23.8	18.9		
Nov	2.3		16.5		24.5	18.8		
Dec	1.5		16.4		23.6	17.9		
3 Month Avg.	2.3	2.0	20.8	15.4	20.3	23.1	17.4	-5.7
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			
Apr	5.634	5.950	6.205	6.061	6.255			
May	6.057	5.820	6.514	5.533	6.576			
Jun	5.955	6.118	6.532	6.408	6.679			
Jul	5.748	6.266	6.618	5.641	6.474			
Aug	6.523	6.200	6.596	5.589	6.804			
Sep	6.005	6.040	6.566	5.583	6.539			
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			
YTD Avg.	5.595	5.569	5.595	6.190	5.562	6.366	14.5	11.6
YTD Total	11.190	11.139	11.191	12.380	11.123	12.732		
12 Month Total	70.477	71.136	75.405	70.138	76.391			

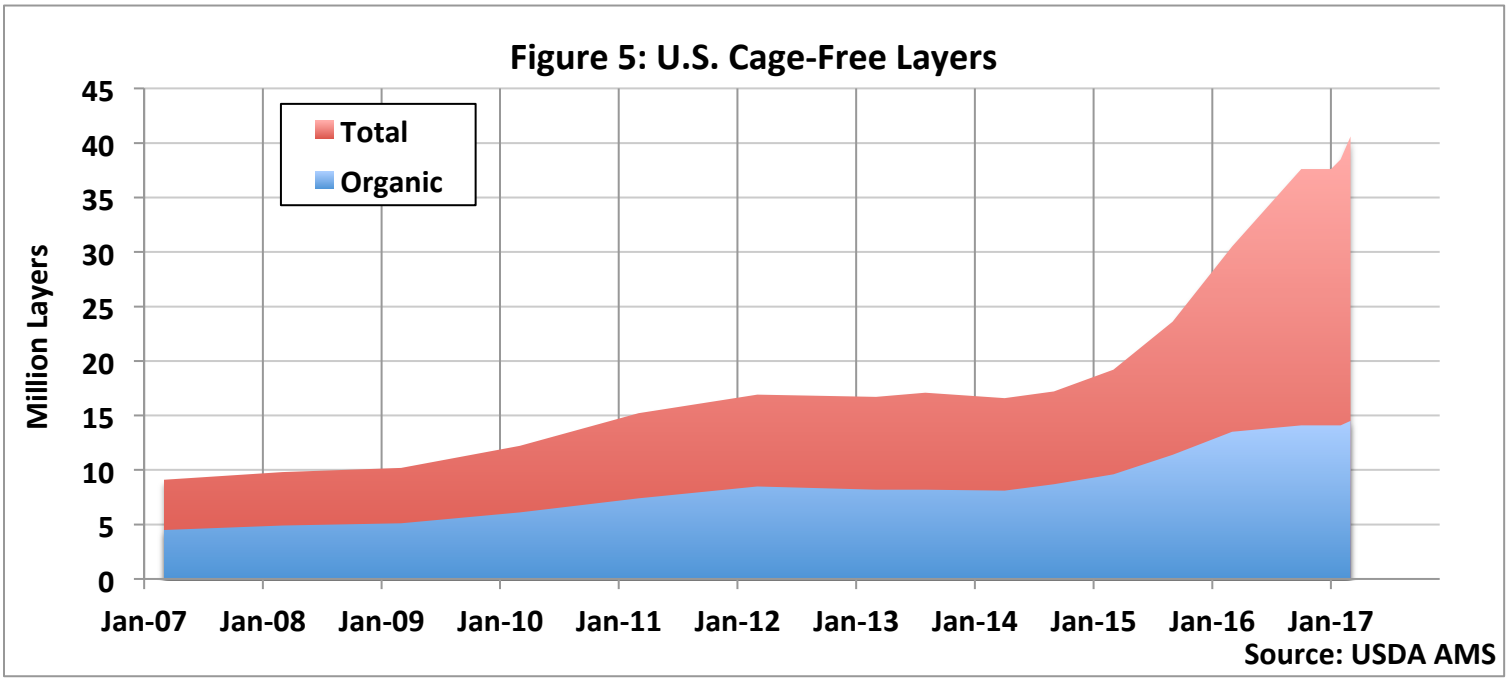
Source: USDA NASS Egg products - monthly

Million Cases Produced	236.092	245.515	231.279	247.832	41.624
% BROKEN	30.1	30.7	30.3	30.8	30.6

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	69.1
2	61.9	61.5	62.2	63.3	66.2	62.9	67.4	67.9
3	62.5	62.8	63.3	64.6	67.2	61.9	68.7	68.7
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	275.8
Change from previous year		0.6	4.4	3.9	9.3	-11.2	18.4	1.1

Source: USDA ERS Livestock and Meat Trade Data. *** Estimates for 2017 (3/2017)**



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		13.5		30.5			
July	17.0		13.5		30.5			
October	23.5		14.1		37.6			

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).

SHELL EGG INVENTORY - AT THE BEGINNING OF THE MONTH (MILLION EGG EQUIVALENT) **TABLE 8**

month	year 2012	2013	2014	2015	2016	2017	% Change with respect to last year	2012-2016
Jan	425.0	485.1	453.2	547.0	547.8	542.4	-1.0	10.3
Feb	465.3	445.2	438.6	476.9	504.8	561.6	11.2	20.5
Mar	487.7	506.6	416.8	524.7	631.0	604.3	-4.2	17.7
Apr	513.7	413.9	541.4	484.2	566.5	609.2	7.5	20.9
May	525.5	470.3	476.6	504.5	563.1			
Jun	468.7	493.4	489.5	542.4	620.0			
Jul	467.4	449.7	480.0	550.5	531.4			
Aug	431.1	496.8	496.0	485.2	584.0			
Sep	534.2	449.5	485.5	516.8	534.5			
Oct	513.5	482.9	482.8	569.3	591.5			
Nov	509.1	465.6	511.9	572.1	598.1			
Dec	477.8	427.5	464.5	560.2	545.1			
4 Month Avg.	472.9	462.7	462.5	508.2	562.5	579.4	3.0	17.3
12 Month Avg.	484.9	465.5	478.1	527.8	568.2			

Source: USDA AMS This is the inventory at week of the month change

FROZEN EGG INVENTORY - AT THE BEGINNING OF THE MONTH (MILLION EGG EQUIVALENT) **TABLE 9**

month	year 2012	2013	2014	2015	2016	2017	% Change with respect to last year	2012-2016
Jan	312.7	234.7	260.0	263.1	350.3	305.4	-12.8	7.5
Feb	320.4	254.1	297.1	297.0	361.1	316.2	-12.4	3.4
Mar	310.9	245.2	296.7	305.4	320.4	351.8	9.8	19.0
Apr	288.7	232.5	248.8	273.9	271.9			
May	278.4	251.3	235.0	267.8	288.4			
Jun	295.5	247.2	242.4	241.7	308.0			
Jul	344.4	262.0	258.2	230.3	325.2			
Aug	331.5	223.7	269.4	234.8	318.7			
Sep	307.5	258.2	255.4	261.9	271.8			
Oct	269.0	287.6	266.6	276.9	283.1			
Nov	248.4	289.8	273.8	321.1	294.2			
Dec	233.9	254.9	260.0	308.5	312.6			
3 Month Avg.	314.7	244.6	284.6	288.5	343.9	324.5	-5.7	9.9
12 Month Avg.	295.1	253.4	263.6	273.5	308.8			

Source: USDA NASS This is the inventory at week of the month change

Note: Information has been converted from metric tonnes at a rate of 42 lbs. per case of liquid egg (edible + inedibles).

DRIED EGG INVENTORY - AT THE BEGINNING OF THE MONTH (MILLION EGG EQUIVALENT) **TABLE 10**

month	year 2012	2013	2014	2015	2016	2017	% Change with respect to last year	2012-2016
Jan	1,004.2	707.9	436.7	567.5	454.5	1,243.0	173.5	96.0
Feb	1,012.1	714.4	446.4	580.4	512.1	1,272.3	148.5	94.8
Mar	967.9	686.0	446.5	598.7	502.7	1,289.9	156.6	101.4
Apr	874.1	585.7	396.8	490.4	497.8			
May	816.1	529.3	365.1	495.0	546.1			
Jun	876.1	515.2	346.7	408.5	674.7			
Jul	968.3	503.8	394.1	391.6	805.4			
Aug	921.9	508.8	495.4	411.0	993.1			
Sep	852.8	548.1	612.2	427.4	1,187.5			
Oct	813.5	594.0	635.7	420.0	1,174.3			
Nov	744.6	557.4	629.2	415.9	1,162.8			
Dec	739.8	478.4	603.6	429.4	1,179.2			
3 Month Avg.	994.7	702.8	443.2	582.2	489.8	1,268.4	159.0	97.4
12 Month Avg.	882.6	577.4	484.0	469.6	807.5			

Source: USDA AMS This is the inventory at week of the month change

Notes. The dried egg was first converted into liquid egg equivalent assuming a drying yeild of:
12.90% for the egg whites, 45.25% for the egg yolks and 25.32% for the whole egg
Information has been converted from metric tonnes at a rate of 42 lbs. per case of liquid egg (edible + inedibles).

EXPORT OF TABLE EGGS IN THE SHELL IN 2017 (Thousand cases- 30 doz) **TABLE 11**

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									409.7	
Apr									335.2	
May									267.3	
Jun									243.6	
Jul									283.1	
Aug									296.0	
Sep									411.0	
Oct									330.6	
Nov									292.7	
Dec									340.2	
2 Mo. Total	84.6	0.6	103.4	0.0	176.1	0.0	93.0	467.0	570.3	1.14
%	18.1	0.1	22.1	0.0	37.7	0.0	19.9			

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 12**

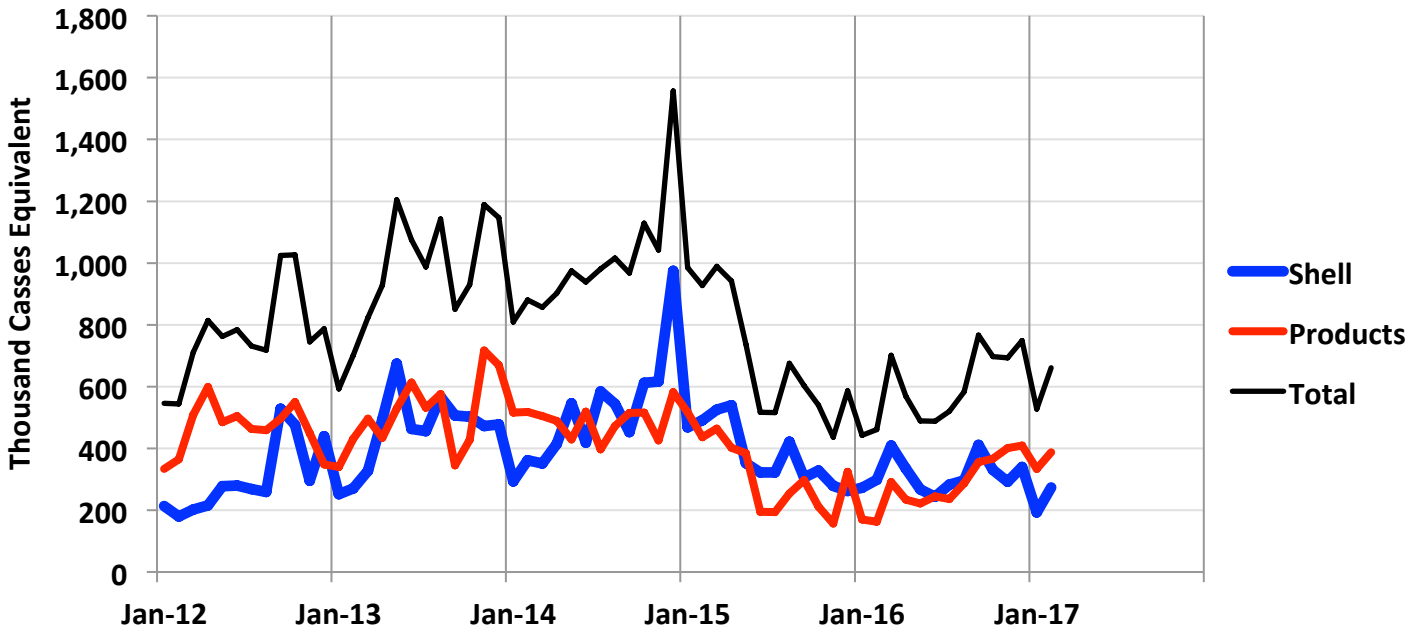
Month \ To	North America	Central America	Caribbean	European Union-28	East Asia	Southeast Asia	Middle East	Total 2017	Total 2016	% of U.S. Production
Jan	86.1	10.9	9.3	71.8	139.0	2.1	4.6	334.0	169.9	1.52
Feb	77.3	0.7	10.3	106.1	144.9	19.3	9.3	387.5	162.8	1.97
Mar									291.3	
Apr									233.8	
May									221.8	
Jun									244.5	
Jul									236.7	
Aug									286.9	
Sep									355.1	
Oct									366.9	
Nov									400.9	
Dec									409.1	
2 Mo. Total	163.4	11.6	19.7	177.9	283.9	21.4	13.9	721.4	332.7	1.75
%	22.6	1.6	2.7	24.7	39.3	3.0	1.9			

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 13**

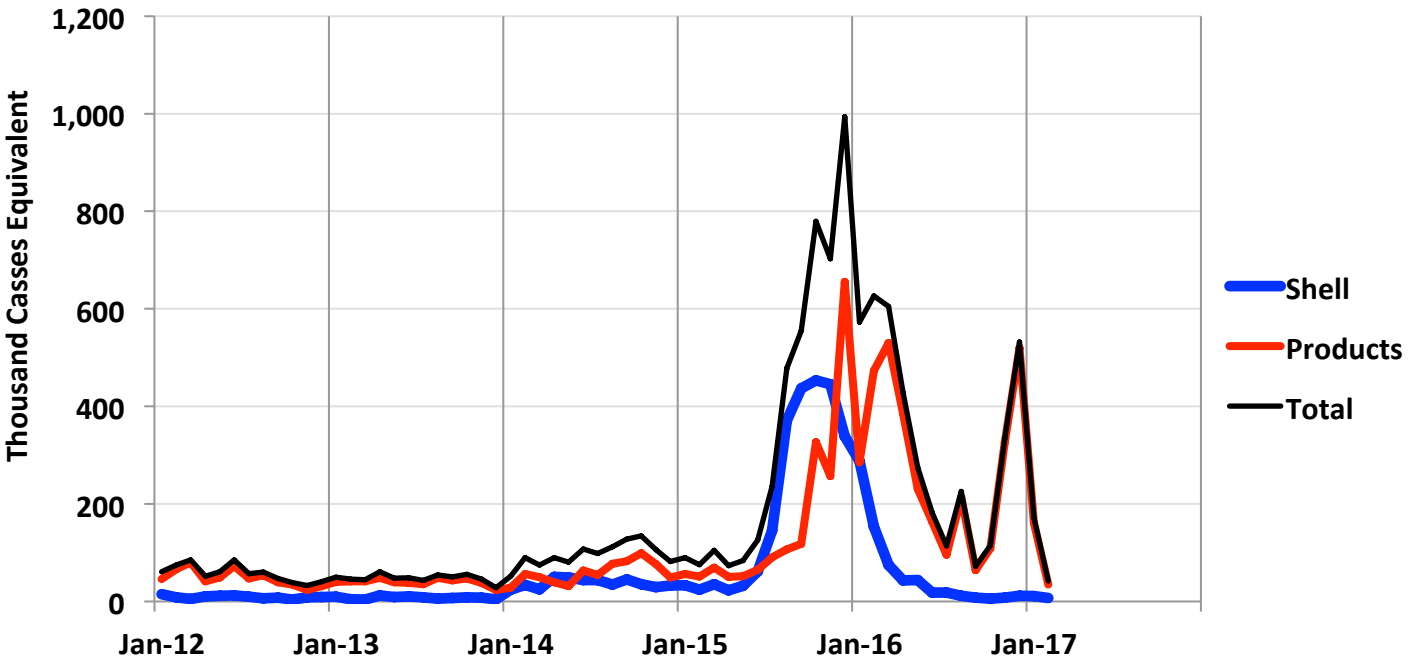
	Table Eggs Produced	Shell Eggs Exported		Egg Products Exported		Total Exported	
	(000) Cases	(000) Cases	% of U.S.	(000) Cases	% of U.S.	(000) Cases	% of U.S.
Jan	21,954	193.1	0.88	334.0	1.52	527.1	2.40
Feb	19,669	273.9	1.39	387.5	1.97	661.4	3.36
Mar							
Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Total/Av	**41,624**	**467.0**	**1.12**	**721.4**	**1.73**	**1,188.4**	**2.86**

Figure 6: U.S. Exports of Shell Egg and Egg Products



Source: USDA FAS

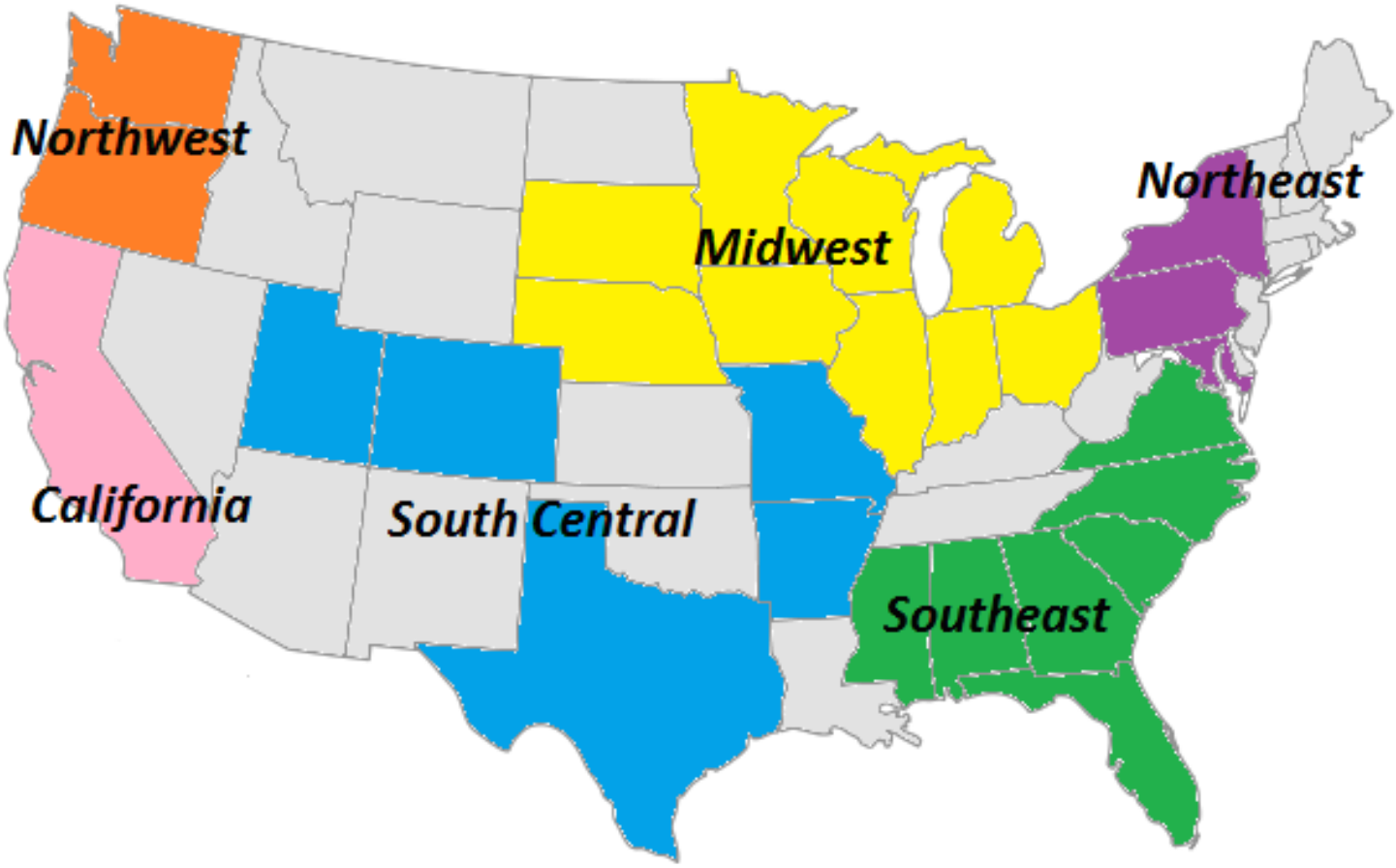
Figure 7: U.S. Imports of Shell Egg and Egg Products



Source: USDA FAS

Note: Information has been converted from metric tonnes at a rate of 42 lbs. per case of liquid egg (edible + inedibles).

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



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 14**

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	161.0	9.2	11.6	307.6
Mar							
Apr							
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
2 Month Avg.	33.3	31.3	38.1	161.2	9.3	11.6	308.2
% of total	10.8	10.1	12.3	52.3	3.0	3.8	

Source: USDA NASS Chickens and Eggs

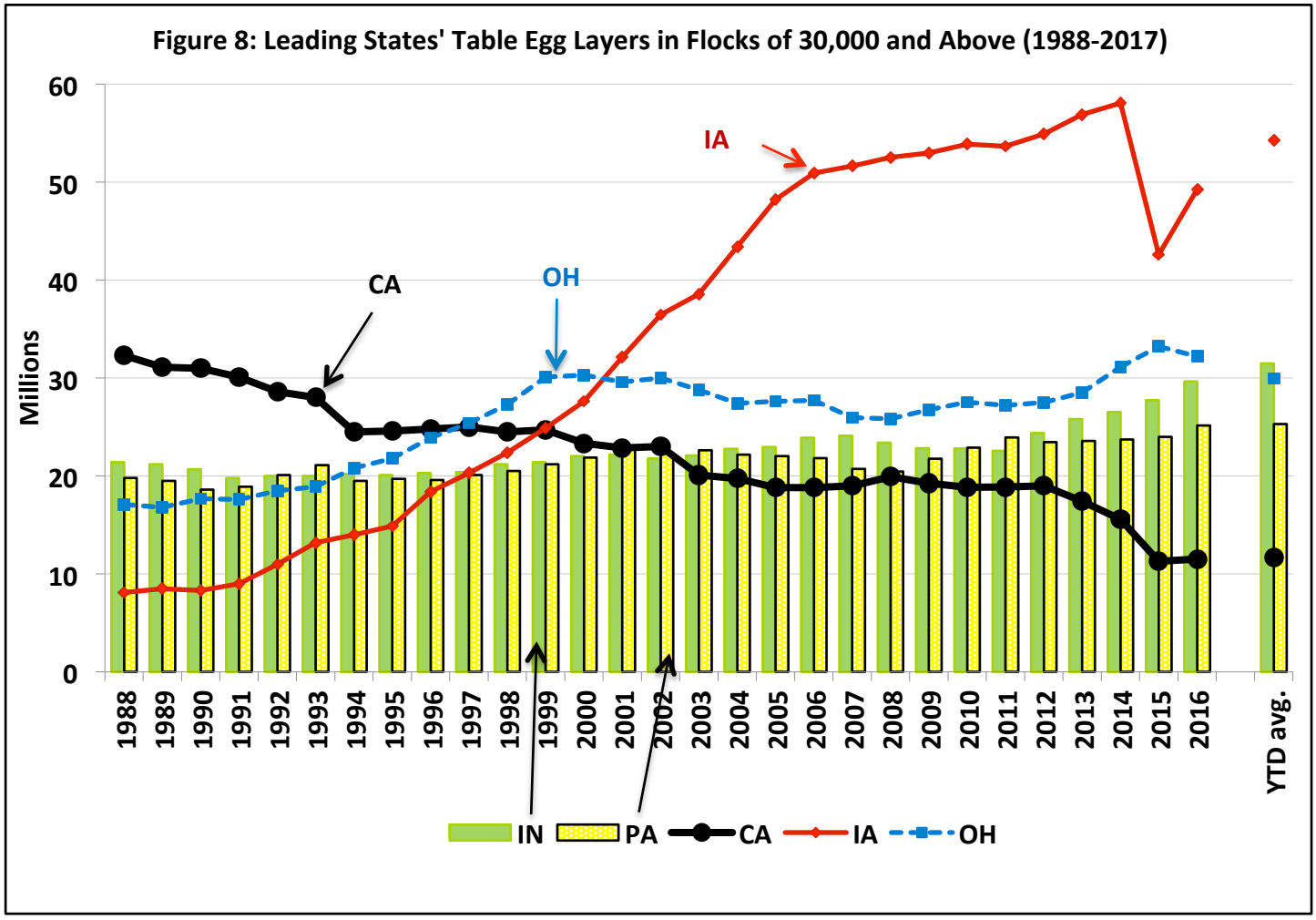
* The drop in the Northeast region number is mostly explained by not having a count for CT and ME for the period after March

TABLE EGG LAYERS IN LEADING STATES - (LAYERS IN 30,000+ HEN FLOCKS) - 2017 **TABLE 15**

month	IA	OH	IN	PA	CA	TX	U.S.
Feb-2016	43.85	33.74	28.85	25.35	11.78	16.55	294.51
			(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	11.59	17.30	307.64
Mar-2017							
Apr-2017							
May-2017							
Jun-2017							
Jul-2017							
Aug-2017							
Sep-2017							
Oct-2017							
Nov-2017							
Dec-2017							
2 Month Avg.	**54.30**	**29.96**	**31.50**	**25.30**	**11.65**	**17.19**	**308.17**

Source: USDA NASS Chickens and Eggs

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



PROJECTED U.S. EGG-TYPE HATCHERY SUPPLY FLOCK (Millions) **TABLE 16**

month	2011	2012	2013	2014	2015	2016	2017
Jan	2.996	2.657	2.579	2.540	2.682	3.081	2.480
Feb	2.883	2.672	2.613	2.536	2.689	3.074	2.497
Mar	2.848	2.731	2.630	2.472	2.605	2.997	2.641
Apr	2.877	2.732	2.588	2.530	2.718	2.840	2.604
May	2.779	2.819	2.515	2.497	2.917	2.805	2.598
Jun	2.755	2.778	2.537	2.439	2.892	2.866	2.646
Jul	2.713	2.791	2.436	2.608	2.797	2.836	2.595
Aug	2.706	2.830	2.515	2.535	2.797	2.725	2.663
Sep	2.659	2.825	2.503	2.553	2.857	2.615	2.654
Oct	2.653	2.786	2.468	2.610	2.958	2.446	
Nov	2.703	2.649	2.555	2.619	2.937	2.465	
Dec	2.672	2.745	2.476	2.664	2.947	2.549	
9 month avg.	2.820	2.751	2.552	2.520	2.762	2.903	2.590
12 month avg.	2.770	2.751	2.535	2.550	2.816	2.775	

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 17**

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

month	2012	2013	2014	2015	2016	2017	2012 to '16 month avg.
Jan	18.7	19.1	17.5	17.9	21.3	19.8	18.9
Feb	17.4	16.1	17.8	18.4	21.5	19.3	18.2
Mar	17.0	17.1	19.2	20.2	22.7	19.9	19.2
Apr	16.9	16.5	18.9	16.5	20.7	19.1	17.9
May	17.6	18.5	18.6	18.2	21.1	20.6	18.8
Jun	18.0	19.1	19.4	18.0	20.8	19.6	19.1
Jul	19.5	21.1	20.6	20.7	24.4	24.1	21.3
Aug	19.4	19.7	20.2	21.4	25.7		21.3
Sep	19.5	20.8	20.9	21.4	23.0		21.1
Oct	20.1	22.6	22.4	21.8	25.8		22.6
Nov	17.5	19.1	20.0	21.3	26.2		20.8
Dec	16.2	18.0	19.2	19.3	19.1		18.4
7 month avg.	17.9	18.2	18.8	18.5	21.8	20.3	19.0
Annual Avg.	18.2	19.0	19.5	19.6	22.7		19.8
Total	218.0	227.7	234.6	235.1	272.2		237.5

Source: USDA NASS Chickens and Eggs % Change to date -6.60

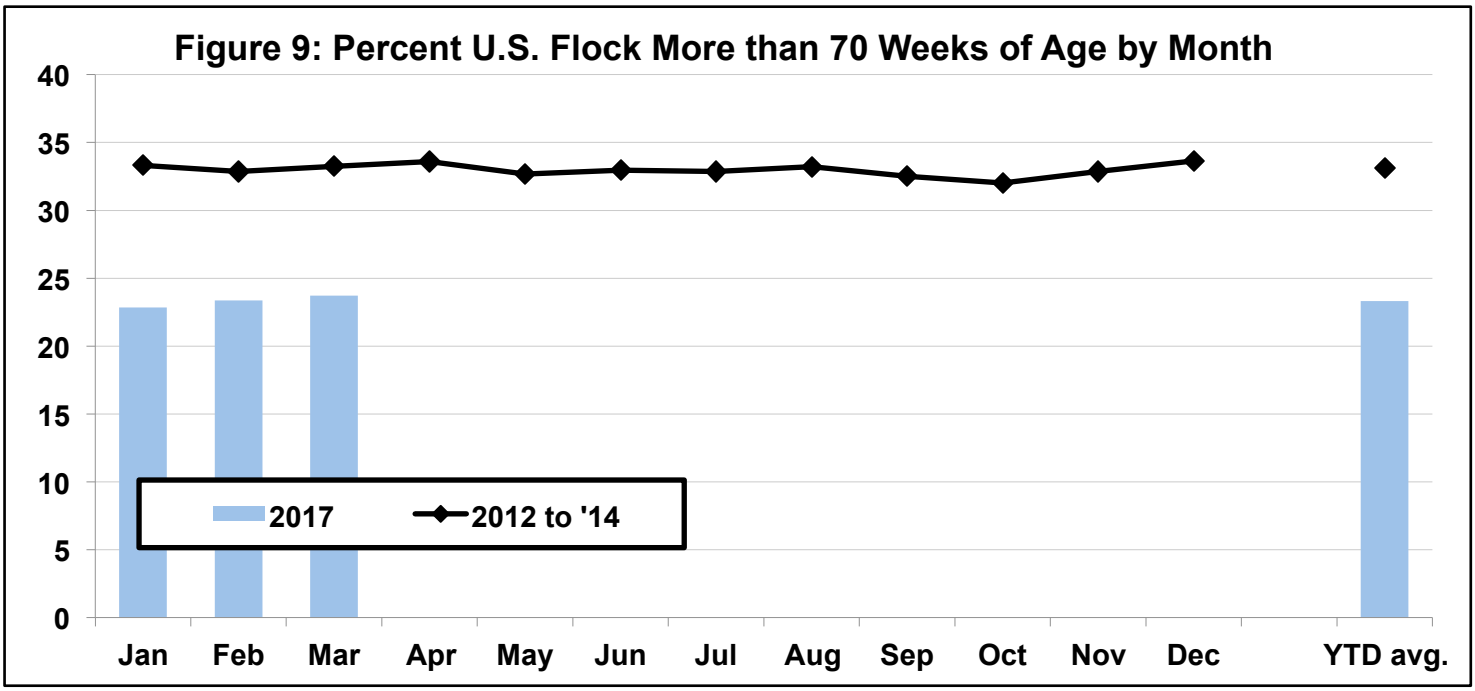
Note: The number of pullets to be housed was reduced by 6 million based on the number reported as lost to avian influenza. We assumed the reduction as evenly spread during the period between May and September 2015 (assuming that the ages of affected birds was evenly distributed).

PROJECTED U.S. TABLE EGG FLOCK MORE THAN 70 WEEKS OF AGE (% of layers) **TABLE 18**

	% 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		22.8	33.3
Feb	32.7	34.1	31.8	31.1		23.4	32.9
Mar	33.0	34.9	31.8	32.0		23.7	33.3
Apr	33.4	34.9	32.5				33.6
May	32.4	33.5	32.2				32.7
Jun	32.8	33.8	32.2				33.0
Jul	32.5	33.7	32.4				32.9
Aug	32.5	33.7	33.4				33.2
Sep	32.3	32.7	32.5				32.5
Oct	32.5	31.4	32.1				32.0
Nov	34.4	32.6	31.5		23.3		32.9
Dec	34.9	33.2	32.8		22.3		33.6
YTD avg.	32.8	34.4	32.2	31.7		23.3	33.1
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 19**

Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected	Projected	Projected	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	316.5	315.9	313.0	311.8	310.8	312.0	312.9	313.3	314.2	317.8

Project. Year end: **Dec, 2017 - 317.7**

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

Note: there is a lot of uncertainty still around the flock projection given that the exports are still a lot lower than in 2013-2014 and the very low prices egg producers are facing.

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

Date calculated: 4/1/2017

2017 Bird Flow by Month

Table 20

	ACTUAL FLOCK (million birds)			
month	Beginning Count	Pullets added [1]	Slaughter, Died & Missing	Ending count
Jan-17	318.6	19.8	20.8	317.6
Feb-17	317.6	19.3	20.4	316.5
Mar-17	316.5	19.9		
Apr-17		19.1		
May-17		20.6		
Jun-17		19.6		
Jul-17		24.1		
Aug-17				
Sep-17				
Oct-17				
Nov-17				
Dec-17				
Jan-18				
Feb-18				
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 21

	PROJECTED FLOCK (million birds)			
month	Beginning Count	Pullets added [1]	Slaughter, Died & Missing	Ending count
Jan-17	318.6	19.8	20.8	317.6
Feb-17	317.6	19.3	20.4	316.5
Mar-17	316.5	19.9	20.5	315.9
Apr-17	315.9	19.1	22.1	313.0
May-17	313.0	20.6	21.7	311.8
Jun-17	311.8	19.6	20.6	310.8
Jul-17	310.8	24.1	22.9	312.0
Aug-17	312.0	20.7	19.8	312.9
Sep-17	312.9	20.3	19.9	313.3
Oct-17	313.3	20.4	19.6	314.2
Nov-17	314.2	19.5	15.9	317.8
Dec-17	317.8	18.2	18.3	317.7
Jan-18	317.7	18.8	20.9	315.6
Feb-18				
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

Actual number

2017 United States Flock Size Projections

Table 22

For March 2017

USDA preliminary
Actual count

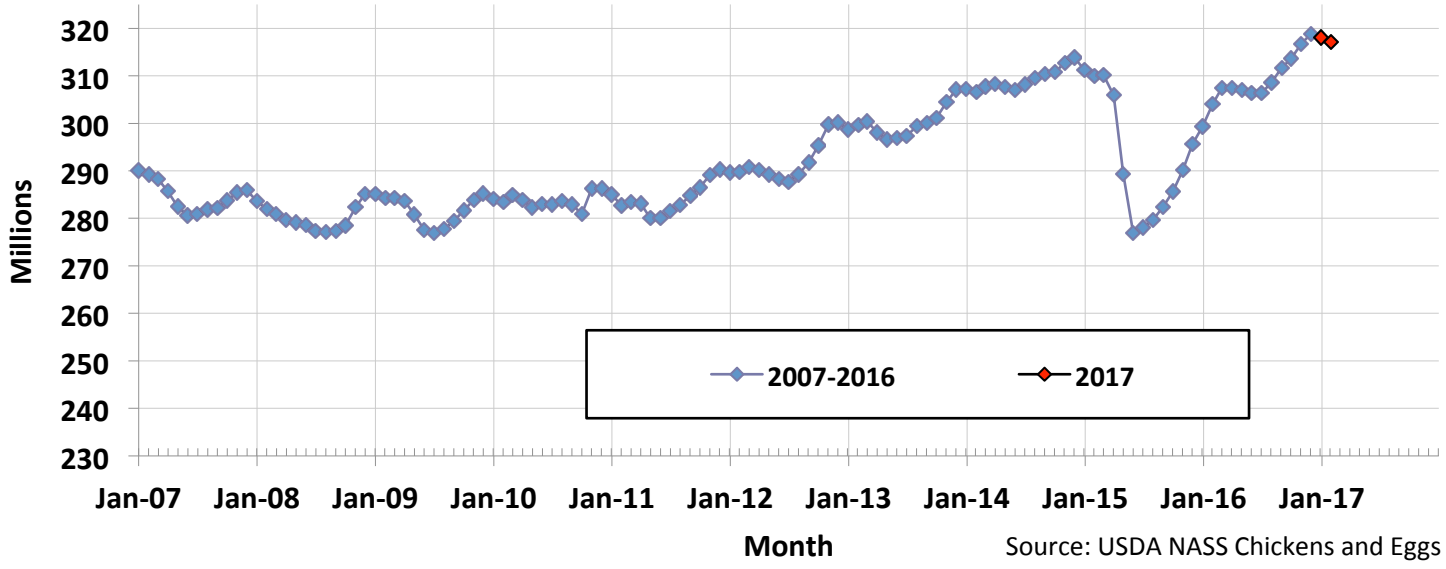
Estimated number of U.S. table egg layers (million) on the 1st of each month

Estimated for Month	Month Number of Layers Projected for 2017/2018											
	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									
Apr-17	315.3	318.0	315.9									
May-17	312.3	314.9	313.0									
Jun-17	311.2	313.7	311.8									
Jul-17	309.7	312.3	310.8									
Aug-17	308.8	311.9	312.0									
Sep-17	310.2	312.9	312.9									
Oct-17	311.0	313.3	313.3									
Nov-17	312.6	314.2	314.2									
Dec-17	316.0	317.8	317.8									
Jan-18		317.8	317.7									
Feb-18			315.6									
Mar-18												
Apr-18												
May-18												
Jun-18												
Jul-18												
Aug-18												
Sep-18												
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 10: U.S. Monthly Table-Egg Layers (2007-2017)



Source: USDA NASS Chickens and Eggs

Figure 11: U.S. Table Eggs per Hundred Hens per Day by Month (2007-2017)

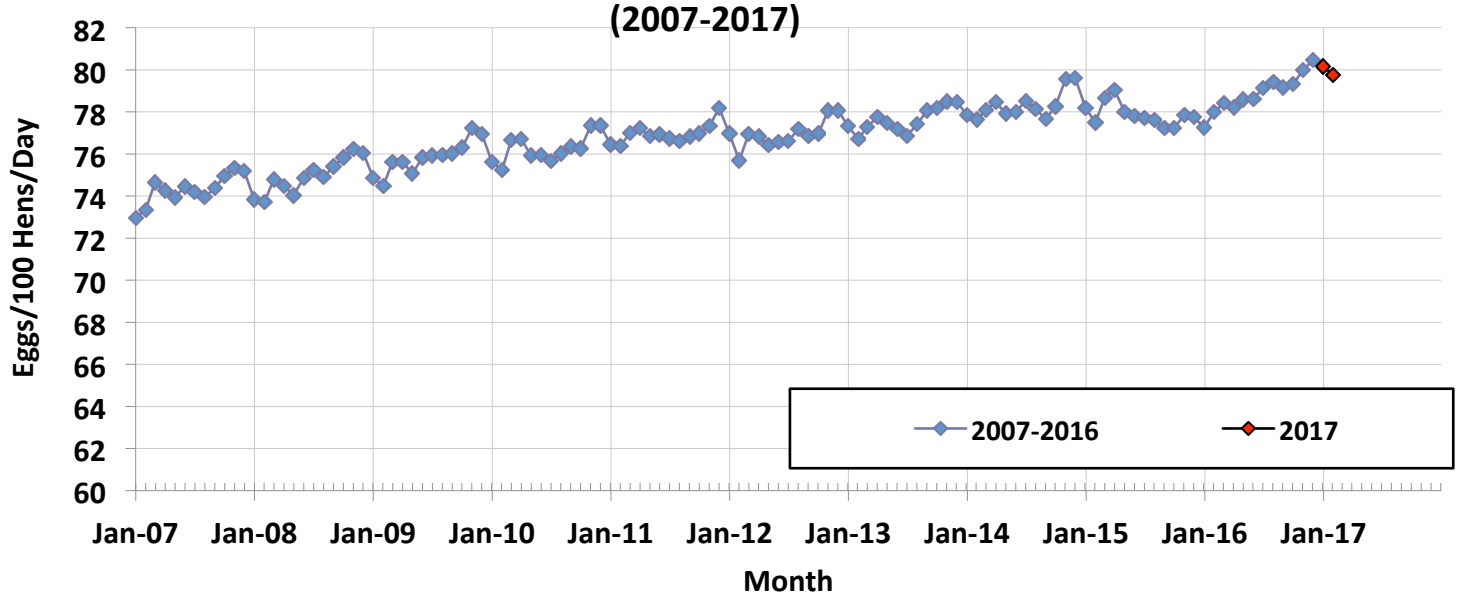
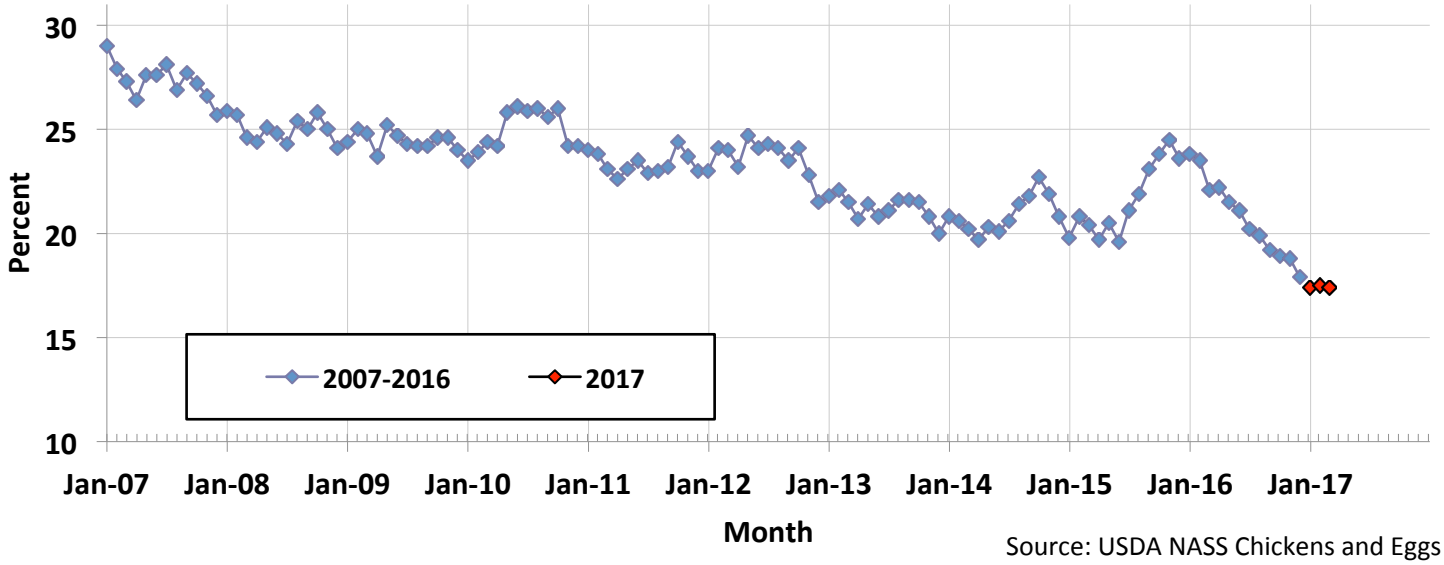
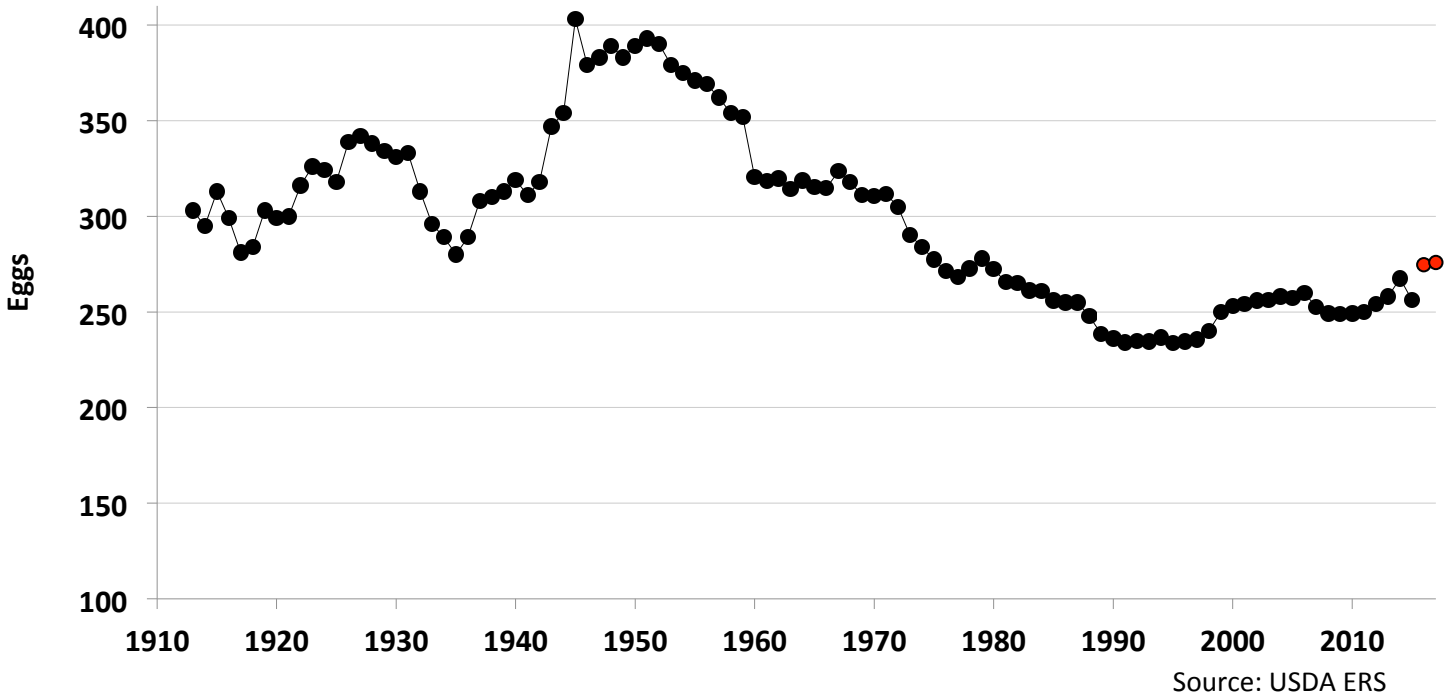


Figure 12: Monthly Percent of U.S. Flock Molted (2007-2017)



Source: USDA NASS Chickens and Eggs

Figure 13: U.S. Per Capita Egg Consumption by Year (1913-2017)



Source: USDA ERS

SUMMARY TO DATE **Table 23**

		2016	2017	% Change
HATCH of EGG-TYPE STRAIGHT RUN (THOUSANDS) (U.S.) (Total)	Jan to Feb	49,063	46,556	-5.1
TABLE-EGG LAYERS (MILLIONS) (U.S.) (Avg.)	Jan to Feb	301.7	317.6	5.3
TABLE EGGS (MILLIONS/MONTH) (U.S.) (Avg.)	Jan to Feb	7,023	7,492	6.7
RATE OF LAY (%) (Avg.)	Jan to Feb	77.6	80.0	2.3
U.S. TABLE EGG AVG. CASES/WEEK (THOUSANDS)	Jan to Feb	1,667	1,778	6.7
AVG MONTHLY CASES OF EGGS BROKEN (MILLION) (U.S.)	Jan to Feb	5.562	6.366	14.5
		2016	**2017**	**Difference**
PERCENT OF U.S. FLOCK IN or POST MOLT (Avg.)	Jan to Mar	23.1	17.4	-5.7
AVERAGE PULLETS ADDED/MONTH (MILLIONS) (U.S.)	Jan to Jul	21.8	20.3	-1.4

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:

University of California Poultry Page	http://animalscience.ucdavis.edu/avian/
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 Report	https://www.ams.usda.gov/mnreports/pymcagefree.pdf

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