

U.S. Flock Trends and Projections

June 6, 2017



Compiled by
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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 April hatch (straight-run chicks) was 1.1% higher than in 2016. This projects forward to a 23.3 million pullet placement for September of 2017 which is 0.3 million smaller than September of 2016 placement (23.0).

* Current (April average, 2017) U.S. table egg layer number (314.9 million) is 2.4 percent larger than last year's number at this time (307.4 million), and down 1.3 million compared to last month (316.1 million).

* In April, Iowa led the nation with 53.4 million laying hens compared to 32.0 million in Indiana, 29.7 million in Ohio, and 25.7 million in Pennsylvania. California (with 11.8 million layers) lost its 5th position to Texas with 17.3 million layers.

* The April U.S. rate of lay was estimated to be 79.9% which is 1.7% higher than April 2016 level. The total number of table eggs produced in April 2017 was 4.6% higher than the April 2016 production.

* The April 2017 number of eggs exported was 29% higher than last year (April 2016) and 3% lower than last month (March 2017). The April exports represented 3.5% of the number of eggs produced.

* Shell eggs broken for products in April 2017 totaled 6.128 million cases, 2.0% less than in April 2016 (6.255 million cases).

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

	2016	2017	% Change
Hatch - Egg-Type Straight Run (thousands) (U.S.)	51,052	51,592	1.1
Table Egg Layers (millions) (U.S.)	307.4	314.9	2.4
Rate of lay (percent)	78.2	79.9	1.7
Molting (May 1, 2017) (percent in + out of a molt)	21.5	17.7	-17.7

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	321.9*

* estimated value

SPECIAL NOTE:

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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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	48,456	-4.0
Mar	50,402	52,142	3.5	Mar	50,187	57,037	55,942	-1.9
Apr	50,861	51,078	0.4	Apr	50,193	51,052	51,592	1.1
May	53,478	47,361	-11.4	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		
5 Month Avg.	50,133	47,695	-4.9	4 Month Avg.	47,006	51,554	50,224	-2.6
5 Month Total	250,664	238,474		4 Month Total	188,022	206,215	200,896	
12 Month Total	560,591			12 Month Total	565,598	585,370		

Source: USDA NASS Chickens and Eggs

Figure 1: Egg-Type Hatch (1,000)

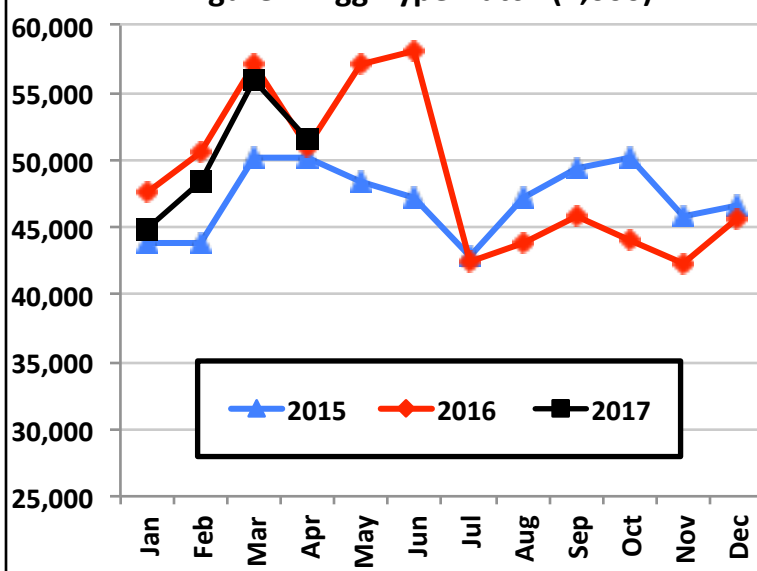
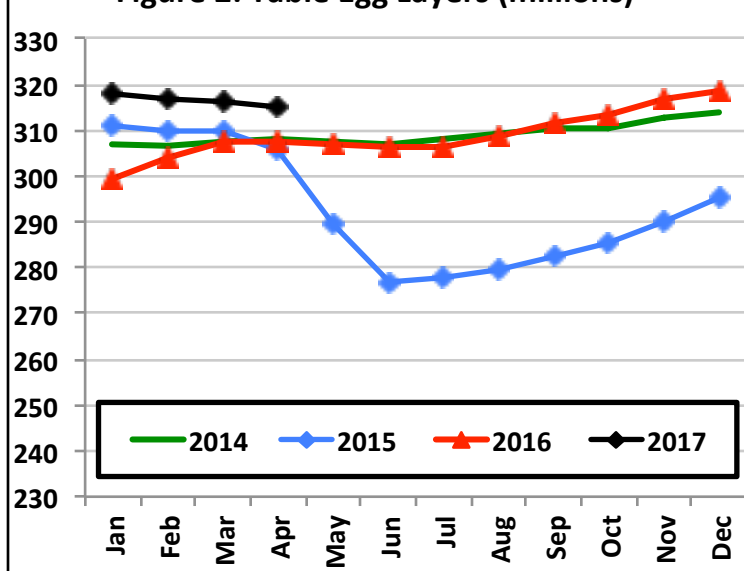


Figure 2: Table Egg Layers (millions)

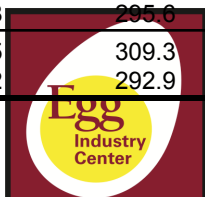


AVERAGE U.S. TABLE EGG LAYERS (MILLIONS)

TABLE 2

month	TOTAL Table Egg Layers						% Change with respect to	
	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			
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			
4 Month Avg.	290.1	299.2	307.5	309.3	304.6	316.5	3.9	4.8
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)						Rate of Lay (Table)	
	2013	2014	2015	2016	2017	Change (%)	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	7,080	2.9	78.0	79.8
Mar	7,198	7,449	7,566	7,475	7,842	4.9	78.4	80.0
Apr	6,954	7,256	7,252	7,213	7,547	4.6	78.2	79.9
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	
4 Month Avg.	6,937	7,197	7,272	7,184	7,593	5.7	78.0	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

Figure 3: Rate of Lay (%)

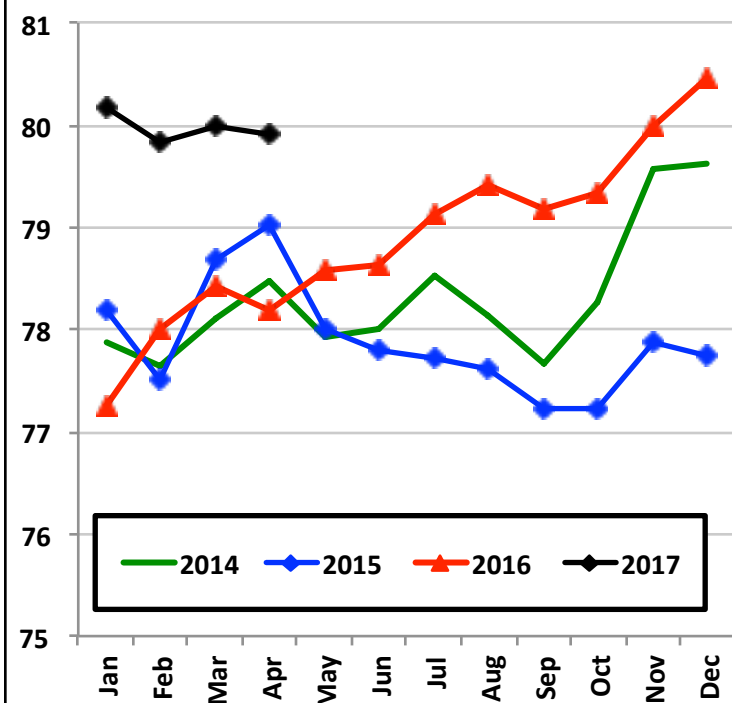
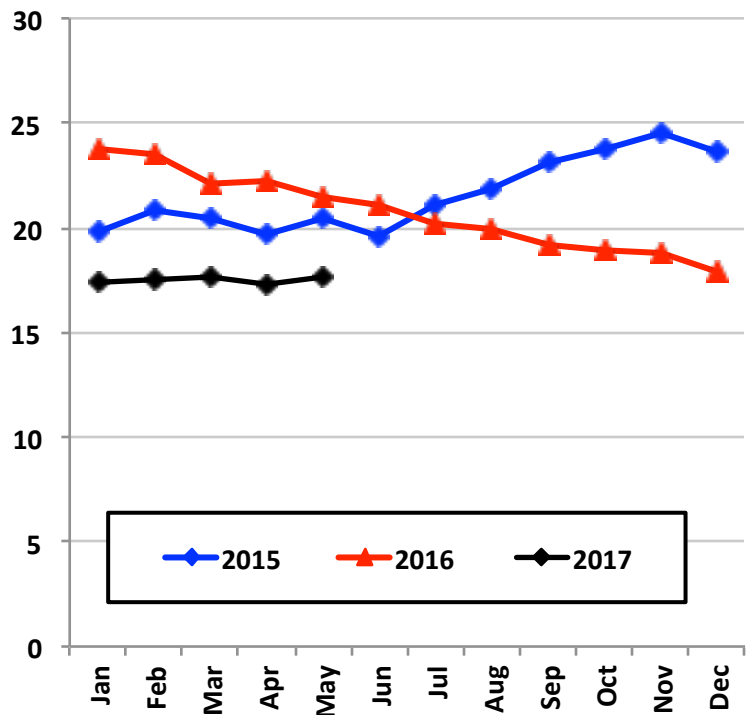


Figure 4: Monthly Percent Molted



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

TABLE 4

month	In a Molt		Completed a Molt		In a molt + Completed a Molt			Change
	2016	2017	2016	2017	2015	2016	2017	
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		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		
5 Month Avg.	2.6	2.1	20.1	15.4	20.2	22.6	17.5	-5.1
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

month	2012	2013	2014	2015	2016	2017	% Change with respect to 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	6.128	-2.0	1.8
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			
4 Month Avg.	5.635	5.730	5.871	6.118	5.922	6.365	7.5	8.7
4 Month Total	22.538	22.920	23.482	24.471	23.686	25.461		
12 Month Total	70.477	71.136	75.405	70.138	76.391			

Source: USDA NASS Egg products - monthly

Million Cases Produced
% BROKEN

236.092	245.515	231.279	247.832	84.366
30.1	30.7	30.3	30.8	30.2



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

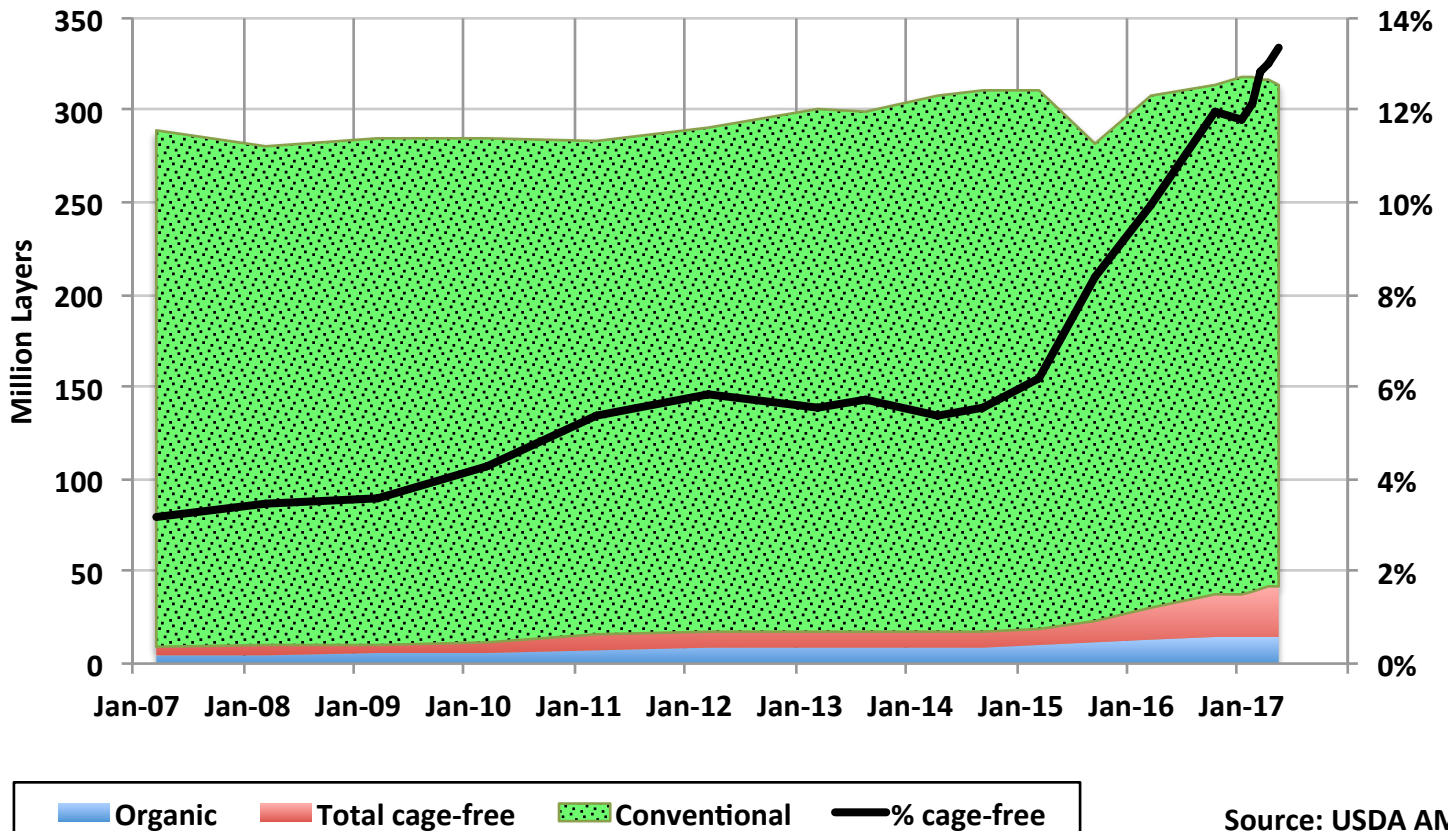
Change from previous year

0.6	4.4	3.9	9.3	-11.2	18.4	1.1
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Source: USDA ERS Livestock and Meat Trade Data.

* Estimates for 2017 (4/2017)

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 % of U.S. Flock
	2016	2017	2016	2017	2016	2017	Change (%)	
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%	13.1%
July	17.0		13.5		30.5			
October	23.5		14.1		37.6			

Source: USDAAMS (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).



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									267.3	
Jun									243.6	
Jul									283.1	
Aug									296.0	
Sep									411.0	
Oct									330.6	
Nov									292.7	
Dec									340.2	
4 Mo. Total	243.0	1.3	204.1	0.1	332.8	0.0	177.5	991.2	1,315.2	1.18
%	24.5	0.1	20.6	0.0	33.6	0.0	17.9			

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 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	2.21
May									221.8	
Jun									244.5	
Jul									236.7	
Aug									286.9	
Sep									355.1	
Oct									366.9	
Nov									400.9	
Dec									409.1	
4 Mo. Total	360.6	12.8	43.0	356.2	719.7	56.6	88.9	1,687.4	857.7	2.00
%	21.4	0.8	2.5	21.1	42.7	3.4	5.3			

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.

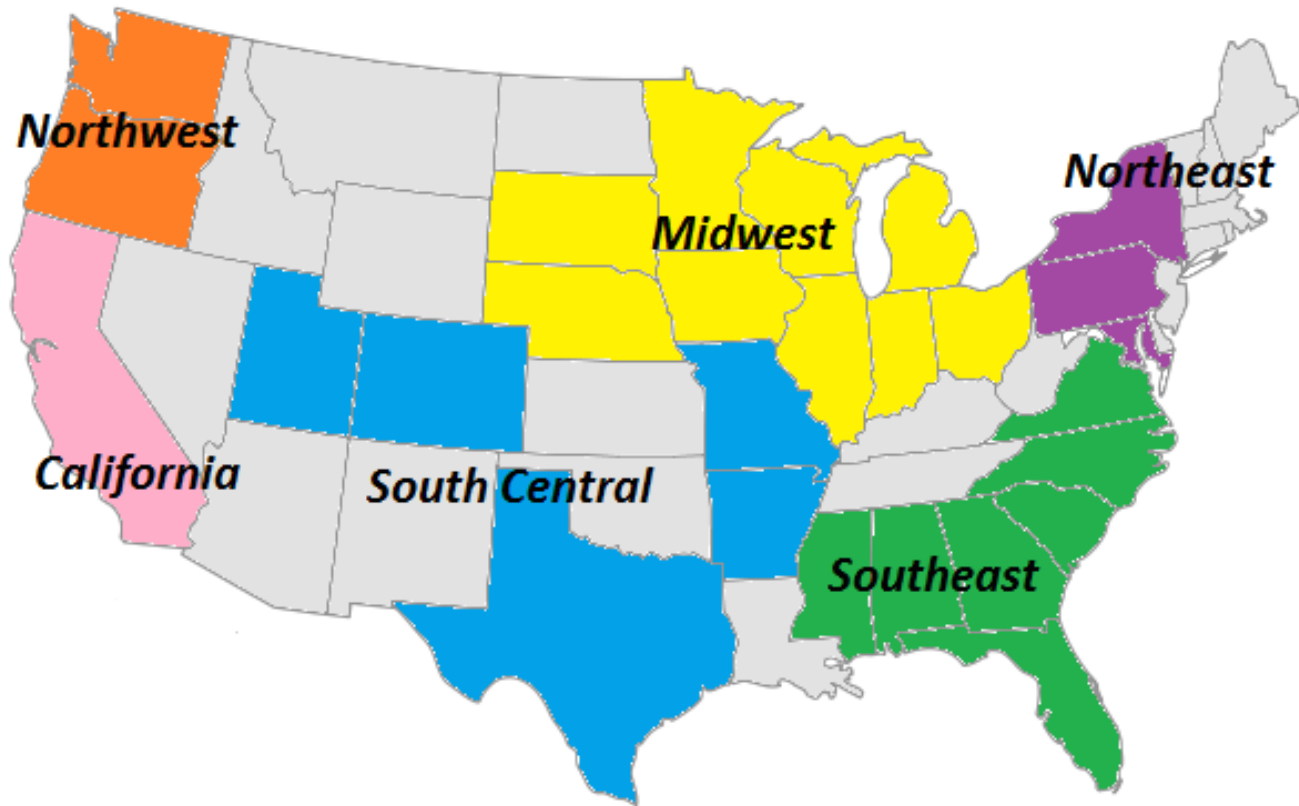
TOTAL EGGS EXPORTED - 2017

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	20,963	270.7	1.29	464.3	2.21	735.0	3.51
May							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
Total/Av	84,366	991.2	1.17	1,687.4	2.00	2,678.7	3.18



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							
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
4 Month Avg.	33.4	30.9	37.8	160.6	9.2	11.7	307.1
% of total	10.9	10.1	12.3	52.3	3.0	3.8	

Source: USDA NASS Chickens and Eggs



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

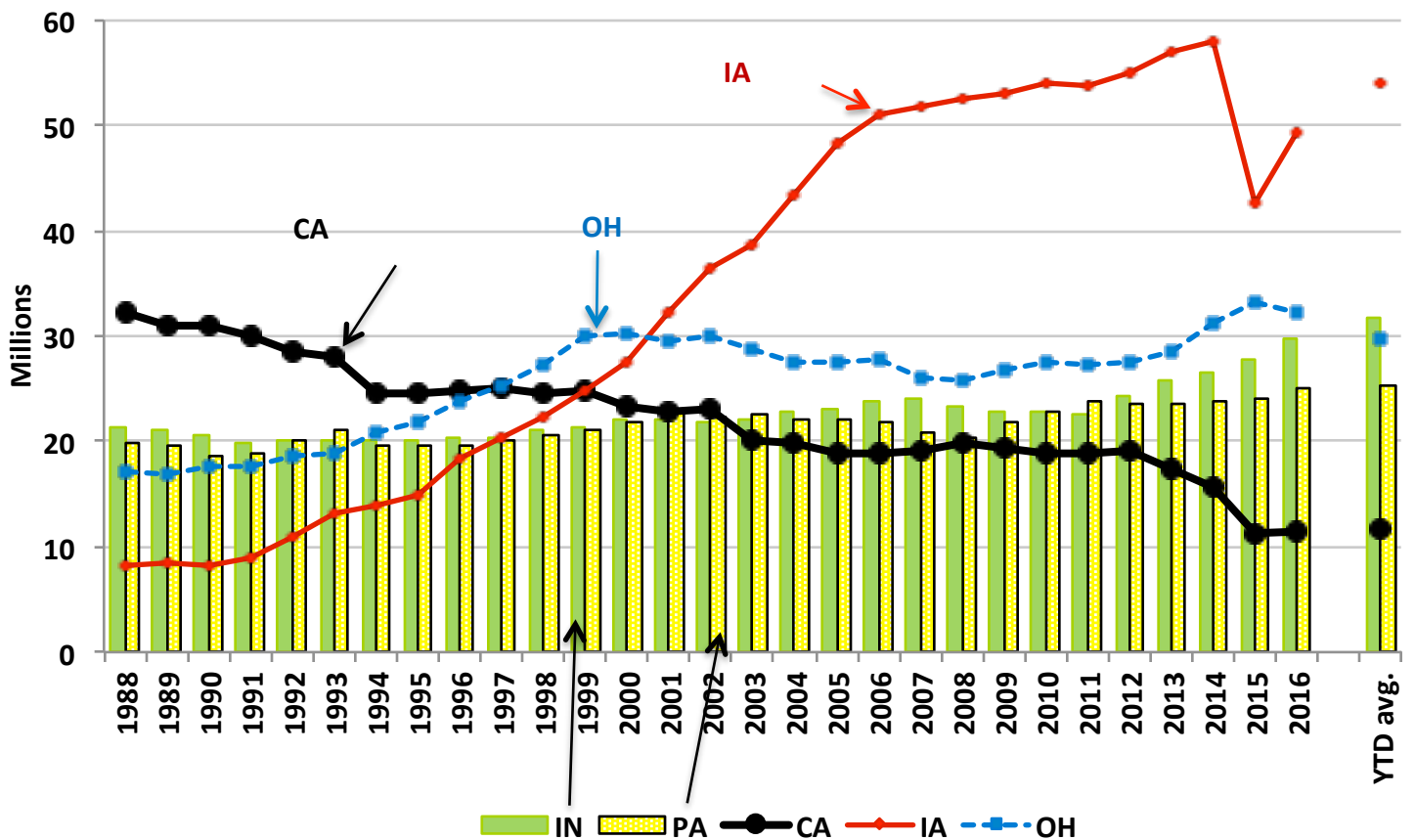
TABLE 12

month	IA	OH	IN	PA	CA	TX	U.S.
Apr-2016	47.89	32.93	29.27	25.49	11.85	16.40	297.93
			(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	305.48
May-2017							
Jun-2017							
Jul-2017							
Aug-2017							
Sep-2017							
Oct-2017							
Nov-2017							
Dec-2017							
4 Month Avg.	54.02	29.82	31.66	25.41	11.70	17.29	307.07

Source: USDA NASS Chickens and Eggs

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

Figure 6: Leading States' Table Egg Layers in Flocks of 30,000 and Above (1988-2017)

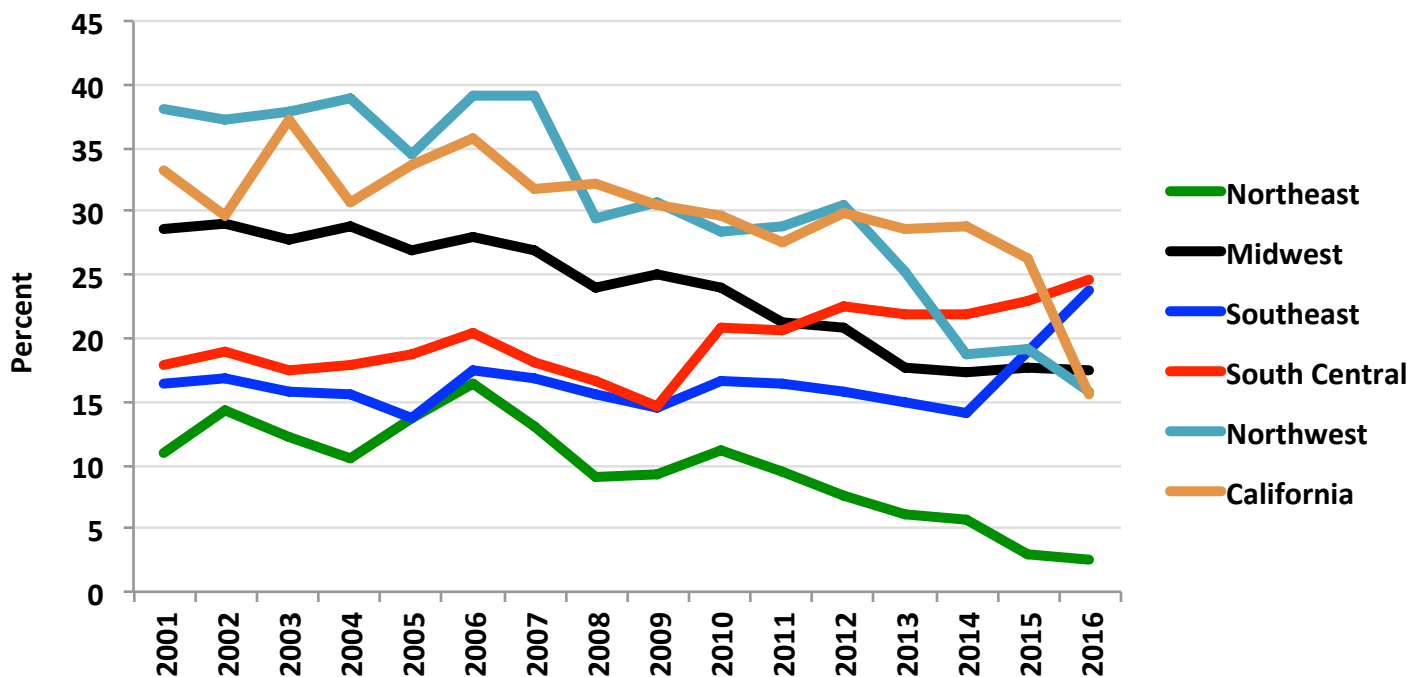


TOTAL MOLT (in-molt plus post-molt) BY REGION (Simple average of reporting States, %) - 2011**TABLE 13**

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	24.3	23.9	11.4	13.8	19.0	17.7
Jun							
Jul							
Aug							
Sep							
Oct							
Nov							
Dec							
5 Month Avg.	2.8	25.0	23.8	11.9	15.2	18.7	17.5
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

**Figure 7: Percent of layers with molt completed by region
(simple average of reporting States)**

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

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	2.681
Nov	2.703	2.649	2.555	2.619	2.937	2.465	2.670
Dec	2.672	2.745	2.476	2.664	2.947	2.549	
11 month avg.	2.779	2.752	2.540	2.540	2.805	2.795	2.612
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 15**

(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	25.2	24.2	21.4
Aug	19.4	19.7	20.2	21.4	25.7	25.2	21.3
Sep	19.5	20.8	20.9	21.4	23.0	23.3	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
9 month avg.	18.2	18.7	19.2	19.2	22.4	21.2	19.6
Annual Avg.	18.2	19.0	19.5	19.6	22.8		19.8
Total	218.0	227.7	234.6	235.1	273.1		237.7

Source: USDA NASS Chickens and Eggs

% Change to date

-5.47

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)

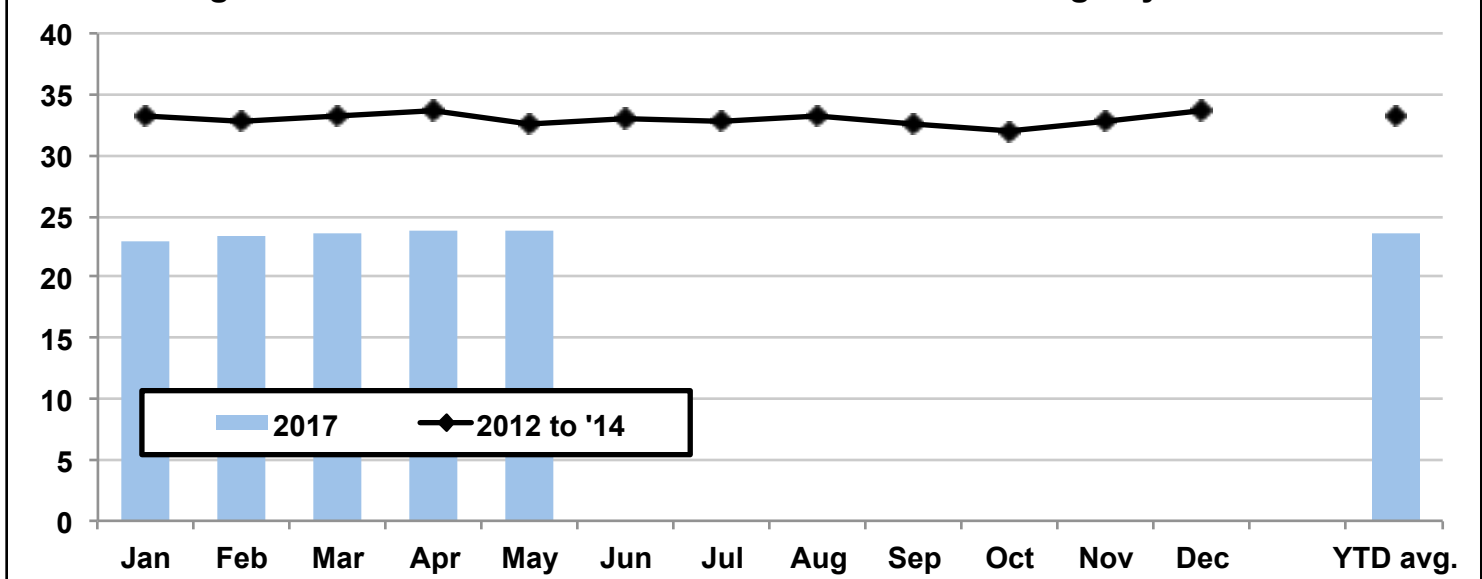
TABLE 16

	% 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		22.8	33.3
Feb	32.7	34.1	31.8	31.1		23.4	32.9
Mar	33.0	34.9	31.8	32.0		23.6	33.3
Apr	33.4	34.9	32.5			23.9	33.6
May	32.4	33.5	32.2			23.9	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.	32.9	34.3	32.3			23.5	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.

Figure 8: Percent U.S. Flock More than 70 Weeks of Age by Month



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:

- 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: $0.06485 + 0.00447 * \text{Price } 12-18_ \text{Jan} + 0.00263 * \text{Price } 12-18_ \text{Feb} + 0.00539 * \text{Price } 12-18_ \text{Mar} + 0.00211 * \text{Price } 12-18_ \text{Apr} + 0.0051 * \text{Price } 12-18_ \text{May} + 0.00731 * \text{Price } 12-18_ \text{Jun} + 0.01306 * \text{Price } 12-18_ \text{Jul} + 0.01388 * \text{Price } 12-18_ \text{Aug} + 0.01266 * \text{Price } 12-18_ \text{Sep} + 0.01361 * \text{Price } 12-18_ \text{Oct} + 0.00939 * \text{Price } 12-18_ \text{Nov} + 0.00256 * \text{Price } 12-18_ \text{Dec} + 0.00853 * \text{"Post Shock HPAI 6-12 mo"} - 0.00045 * \text{"MOLT - previous 12-mo"}$

... 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 HPAI outbreak

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

Adjusted $R^2=0.78$
- 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: $0.02855 + 0.50512 * \text{Added /Beg. count} + 0.00446 * \text{Jan} - 0.00313 * \text{Feb} + 0.00129 * \text{Mar} + 0.00766 * \text{Apr} + 0.00457 * \text{May} + 0.00278 * \text{Jun} + 0.0029 * \text{Jul} - 0.00163 * \text{Aug} - 0.00076 * \text{Sep} - 0.00207 * \text{Oct} - 0.00935 * \text{Nov} + 0.01546 * \text{Shock_Apr} + 0.07849 * \text{Shock_May} + 0.02372 * \text{Shock_Sep} + 0.00306 * \text{"CPI adjusted Shell \$ under 0.65"}$

... 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	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	316.0	316.3	313.5	312.3	311.3	312.5	315.7	317.4	318.3	322.0

Project. Year end:

Dec, 2017 - 321.9

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: 6/1/2017

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	19.8	20.8	317.6
Feb-17	317.6	19.3	20.9	316.0
Mar-17	316.0	19.9	19.6	316.3
Apr-17	316.3	19.1	21.9	313.5
May-17	313.5	20.6		
Jun-17		19.6		
Jul-17		24.2		
Aug-17		25.2		
Sep-17		23.3		
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 19

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	20.9	316.0
Mar-17	316.0	19.9	19.6	316.3
Apr-17	316.3	19.1	21.9	313.5
May-17	313.5	20.6	21.7	312.3
Jun-17	312.3	19.6	20.6	311.3
Jul-17	311.3	24.2	23.0	312.5
Aug-17	312.5	25.2	22.1	315.7
Sep-17	315.7	23.3	21.5	317.4
Oct-17	317.4	20.7	19.8	318.3
Nov-17	318.3	19.8	16.1	322.0
Dec-17	322.0	18.5	18.5	321.9
Jan-18	321.9	19.0	20.2	320.7
Feb-18	320.7	18.4	18.5	320.7
Mar-18	320.7	19.2	19.3	320.7
Apr-18	320.7			
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 20

For May 2017		USDA preliminary		Estimated number of U.S. table egg layers (million) on the 1 st of each month									
		Actual count											
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	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								
Jun-17	311.2	313.7	311.8	312.2	312.3								
Jul-17	309.7	312.3	310.8	311.2	311.3								
Aug-17	308.8	311.9	312.0	312.4	312.5								
Sep-17	310.2	312.9	312.9	315.5	315.7								
Oct-17	311.0	313.3	313.3	315.9	317.4								
Nov-17	312.6	314.2	314.2	316.8	318.3								
Dec-17	316.0	317.8	317.8	320.5	322.0								
Jan-18		317.8	317.7	320.4	321.9								
Feb-18			315.6	318.2	320.7								
Mar-18				318.2	320.7								
Apr-18					320.7								
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 9: U.S. Monthly Table-Egg Layers (2007-2017)

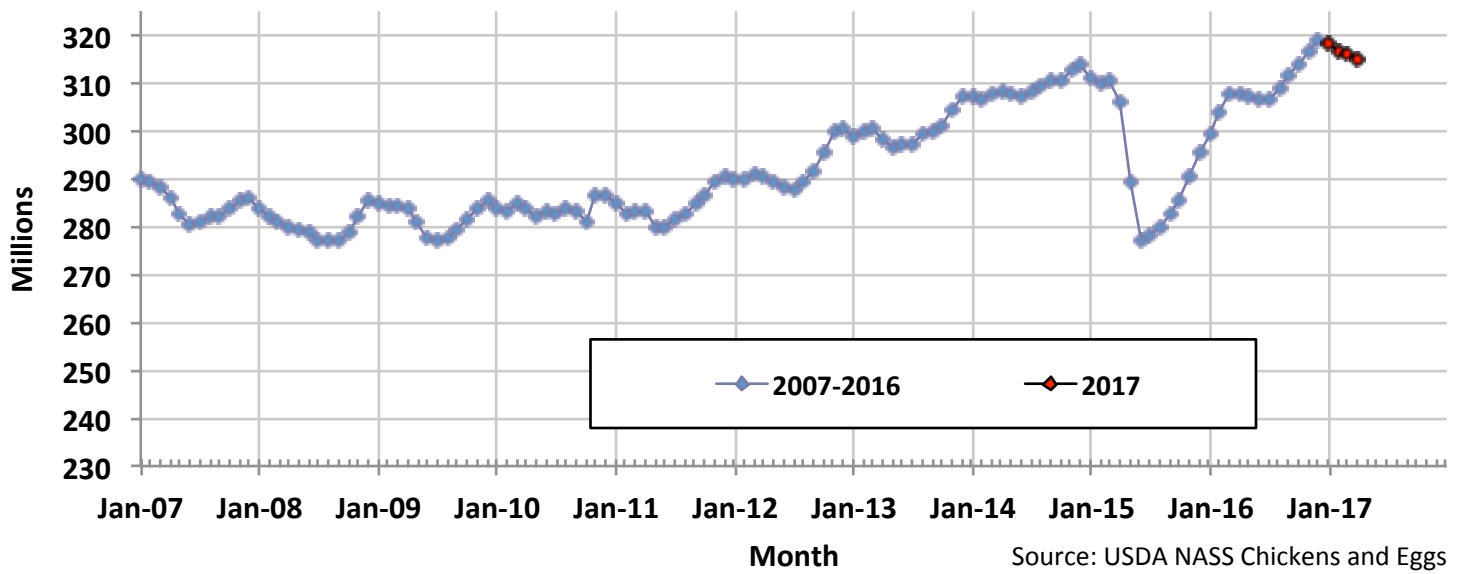


Figure 10: U.S. Table Eggs per Hundred Hens per Day by Month (2007-2017)

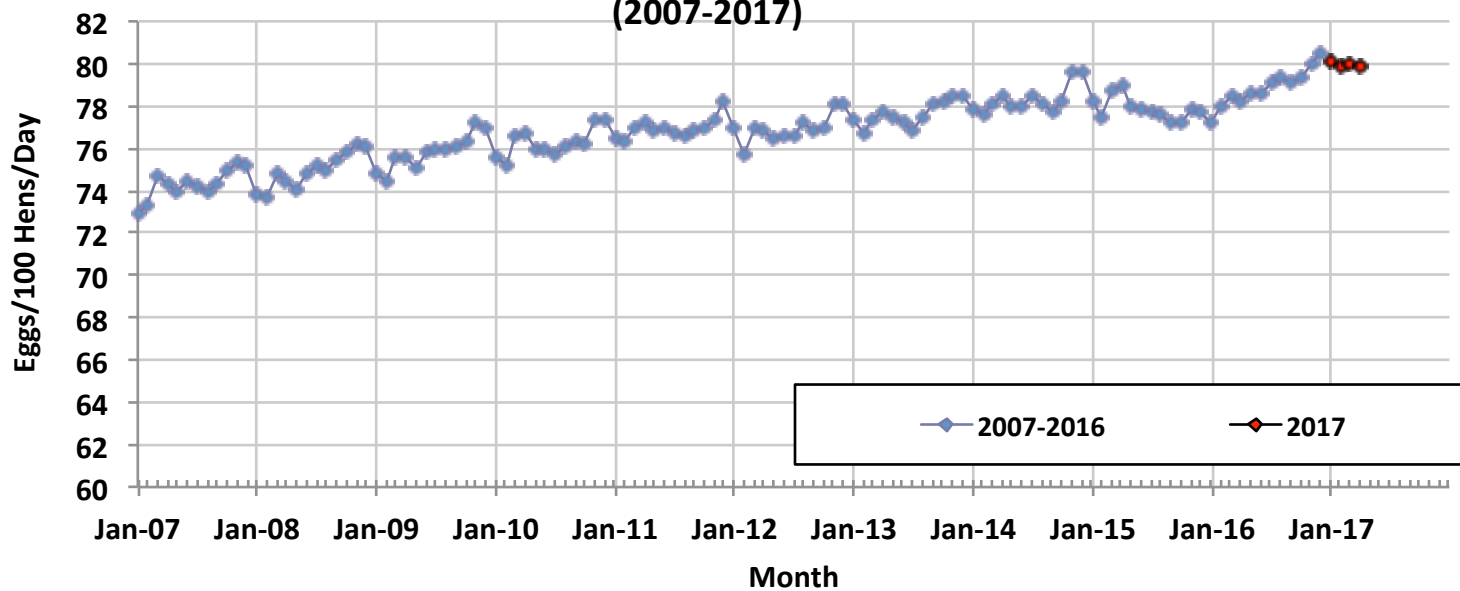
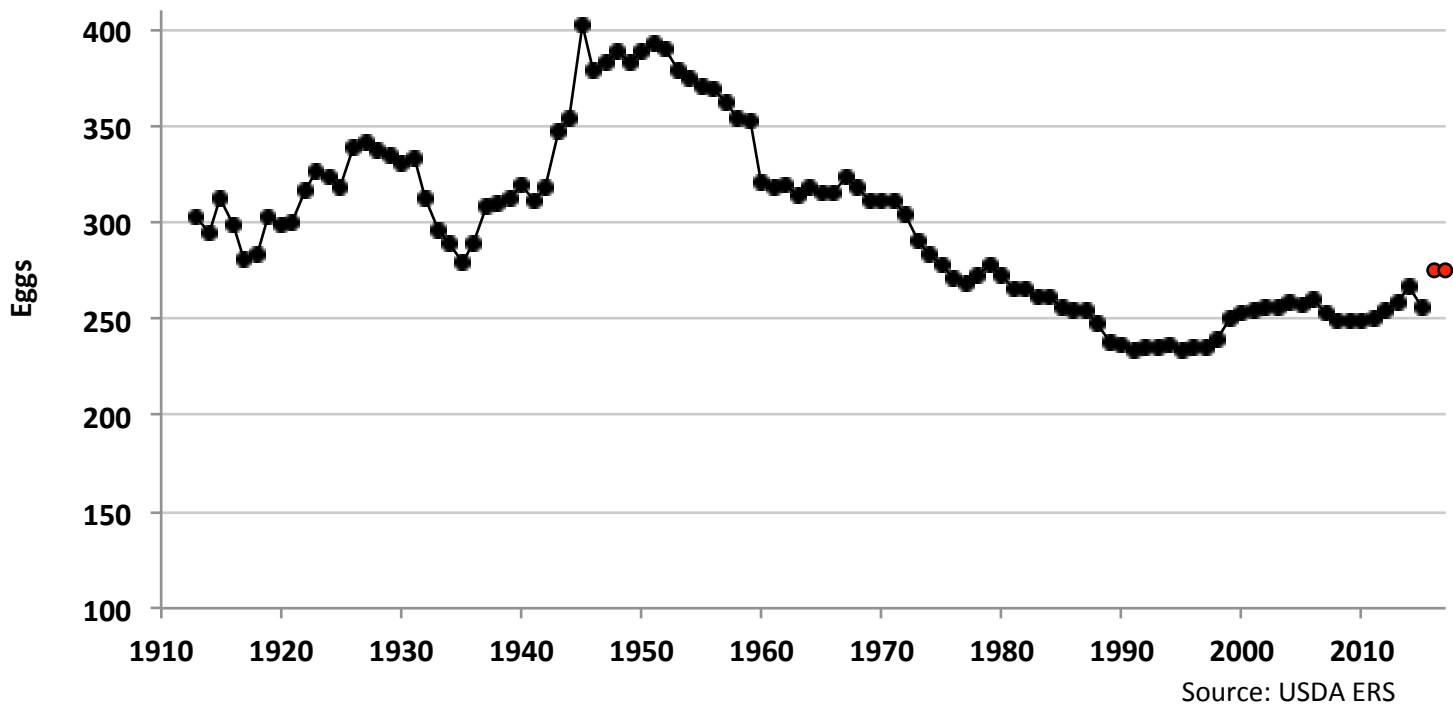


Figure 11: Monthly Percent of U.S. Flock Molted (2007-2017)



Figure 12: U.S. Per Capita Egg Consumption by Year (1913-2017)



SUMMARY TO DATE

Table 21

			2016	2017	% Change
HATCH of EGG-TYPE STRAIGHT RUN (THOUSANDS) (U.S.) (Total)	Jan to Apr		51,554	50,224	-2.6
TABLE-EGG LAYERS (MILLIONS) (U.S.) (Avg.)	Jan to Apr		304.6	316.5	3.9
TABLE EGGS (MILLIONS/MONTH) (U.S.) (Avg.)	Jan to Apr		7,184	7,593	5.7
RATE OF LAY (%) (Avg.)	Jan to Apr		78.0	80.0	2.0
U.S. TABLE EGG AVG. CASES/WEEK (THOUSANDS)	Jan to Apr		1,676	1,772	5.7
AVG MONTHLY CASES OF EGGS BROKEN (MILLION) (U.S.)	Jan to Apr		5.922	6.365	7.5
			2016	2017	Difference
PERCENT OF U.S. FLOCK IN or POST MOLT (Avg.)	Jan to May		22.6	17.5	-5.1
AVERAGE PULLETS ADDED/MONTH (MILLIONS) (U.S.)	Jan to Sep		22.4	21.2	-1.2

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>
 USDAAMS Monthly USDA Cage-Free Shell Egg Report <https://www.ams.usda.gov/mnreports/pymcagefree.pdf>

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