

U.S. Flock Trends and Projections

September 6, 2018



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 July hatch (straight-run chicks) was 22.4% higher than July 2017. This projects forward to a 22.9 million pullet placement for December of 2018 which is 4.2 million higher than December of 2017 placement (18.7).

* Current (July average, 2018) U.S. table egg layer number (323.2 million) is 3.5 percent larger than last year's number at this time (312.4 million), and similar to last month (323.5 million).

* In July, Iowa led the nation with 56.1 million laying hens compared to 30.9 million in Ohio, 31.8 million in Indiana, and 25.1 million in Pennsylvania. California (with 14.0 million layers) lost it's 5th position to Texas with 17.9 million layers.

* The August 1st U.S. rate of lay was 79.0% which is 1.4% lower than August 1st 2017 level. The total number of table eggs produced in July 2018 was 1.6% higher than the July 2017 production.

* The July 2018 number of eggs exported was 6% lower than last year (July 2017) and 2% higher than last month (June 2018). The July exports represented 2.8% of the number of eggs produced.

* Shell eggs broken for products in July 2018 totaled 6.788 million cases, 6.5% more than in July 2017 (6.376 million cases).

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

	2016	2017	% Change
Hatch - Egg-Type Straight Run (thousands) (U.S.)	41,463	50,752	22.4
Table Egg Layers (millions) (U.S.)	312.4	323.2	3.5
Rate of lay (percent)	80.2	78.7	-1.5
Molting (August 1, 2018) (percent in + out of a molt)	18.0	17.0	-5.6

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

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Million	285.6	285.2	286.8	290.1	298.6	308.2	312.9	297.7	318.9	322.0	339.2*

* preliminary value

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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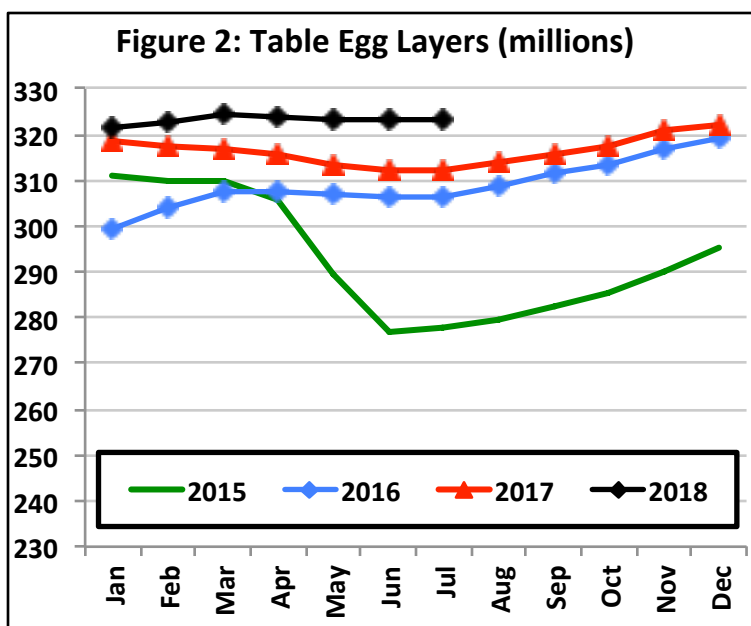
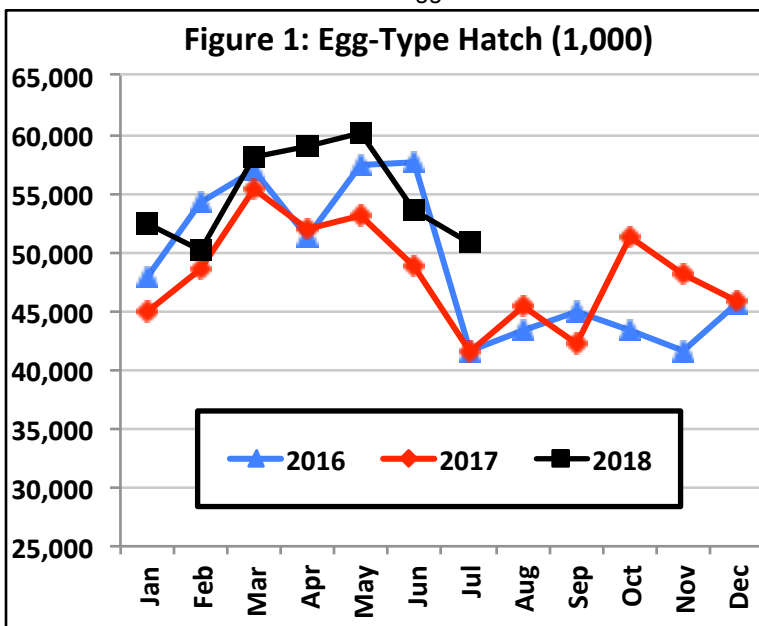


EGG TYPE: EGGS IN INCUBATORS (on the 1st of the month) and STRAIGHT RUN HATCH (U.S.)

TABLE 1

EGG-TYPE Eggs in Incubators (thousands)				EGG-TYPE Straight Run Hatch (thousands)				
month	2017	2018	Change (%)	month	2016	2017	2018	Change %
Jan	39,741	46,750	17.6	Jan	47,775	44,906	52,313	16.5
Feb	48,152	51,216	6.4	Feb	54,289	48,456	50,148	3.5
Mar	52,142	56,120	7.6	Mar	57,055	55,457	58,147	4.9
Apr	51,078	55,990	9.6	Apr	51,266	52,025	58,986	13.4
May	47,517	56,063	18.0	May	57,306	53,073	60,063	13.2
Jun	46,556	50,523	8.5	Jun	57,562	48,828	53,486	9.5
Jul	41,218	46,390	12.5	Jul	41,609	41,463	50,752	22.4
Aug	40,123	46,681	16.3	Aug	43,258	45,439		
Sep	40,068			Sep	44,892	42,271		
Oct	46,262			Oct	43,344	51,239		
Nov	44,949			Nov	41,648	47,999		
Dec	46,495			Dec	45,633	45,846		
8 Month Avg.	45,816	51,217	11.8	7 Month Avg.	52,409	49,173	54,842	11.5
8 Month Total	366,527	409,733		7 Month Total	366,862	344,208	383,895	
12 Month Total	560,591			12 Month Total	585,637	577,002		

Source: USDA NASS Chickens and Eggs



AVERAGE U.S. TABLE EGG LAYERS (MILLIONS)

TABLE 2

month	TOTAL Table Egg Layers						% Change with respect to	
	2013	2014	2015	2016	2017	2018	last year	2012-2016
Jan	298.7	307.2	311.2	299.3	318.5	321.4	0.9	4.7
Feb	299.7	306.7	310.0	304.0	317.3	322.7	1.7	4.9
Mar	300.4	307.7	310.2	307.4	316.7	324.5	2.5	5.2
Apr	298.1	308.3	305.9	307.4	315.8	324.1	2.6	5.5
May	296.6	307.6	289.3	307.0	313.5	323.5	3.2	6.8
Jun	296.9	307.0	276.9	306.5	312.2	323.5	3.6	7.9
Jul	297.4	308.2	278.1	306.4	312.4	323.2	3.5	7.6
Aug	299.4	309.6	279.7	308.6	313.8			
Sep	300.1	310.4	282.4	311.7	315.5			
Oct	301.1	310.7	285.6	313.6	317.8			
Nov	304.5	312.7	290.2	316.7	320.7			
Dec	307.1	313.8	295.6	319.0	322.1			
7 Month Avg.	298.2	307.5	297.4	305.4	315.2	323.3	2.6	6.1
Annual Avg.	300.0	309.2	292.9	309.0	316.3			

Source: USDA NASS Chickens and Eggs



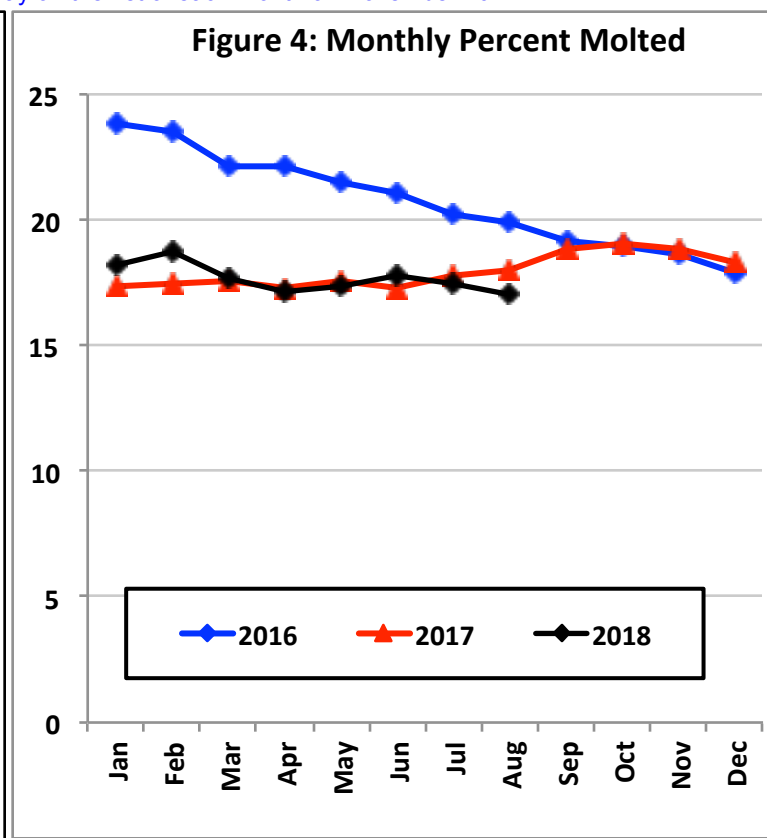
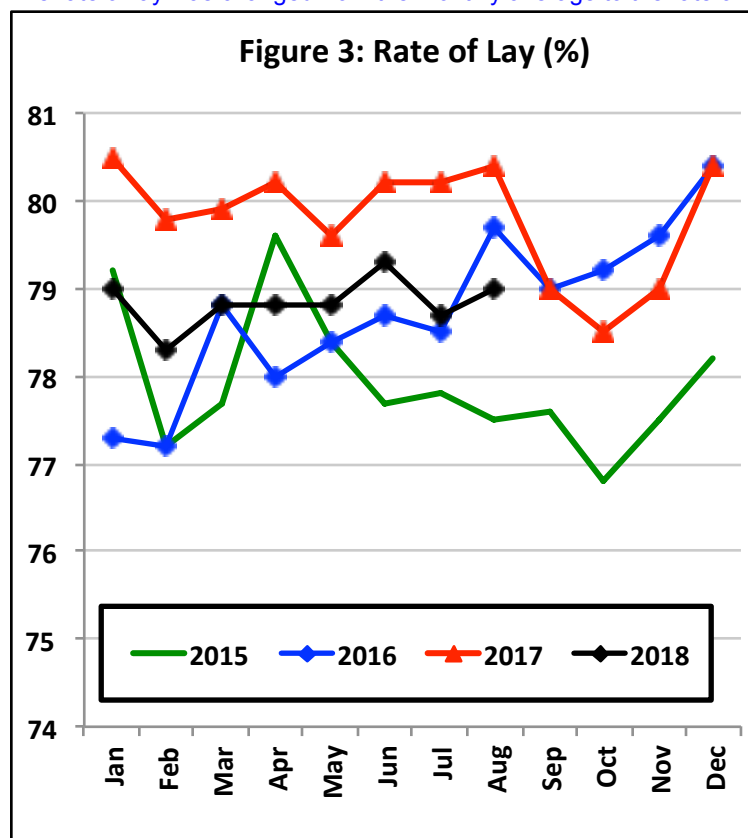
U.S. TABLE EGGS, AND RATE OF LAY on the 1st of EACH MONTH (ALL STATES)

TABLE 3

month	Table Eggs - human consumption (millions)						Rate of Lay (Table)	
	2014	2015	2016	2017	2018	Change (%)	2017	2018
Jan	7,417	7,545	7,168	7,916	7,842	-0.9	80.5	79.0
Feb	6,667	6,726	6,878	7,096	7,100	0.1	79.8	78.3
Mar	7,449	7,566	7,475	7,862	7,932	0.9	79.9	78.8
Apr	7,256	7,252	7,213	7,573	7,665	1.2	80.2	78.8
May	7,433	6,996	7,479	7,765	7,933	2.2	79.6	78.8
Jun	7,185	6,464	7,228	7,514	7,670	2.1	80.2	79.3
Jul	7,501	6,698	7,514	7,782	7,903	1.6	80.2	78.7
Aug	7,497	6,729	7,597	7,755			80.4	79.0
Sep	7,230	6,544	7,402	7,457			79.0	
Oct	7,539	6,837	7,724	7,763			78.5	
Nov	7,465	6,778	7,602	7,676			79.0	
Dec	7,746	7,125	7,954	7,964			80.4	
YTD Avg.	7,273	7,035	7,279	7,644	7,721	1.0	80.1	78.8
Annual Avg.	7,365	6,938	7,436	7,677			79.8	
Total	88,385	83,260	89,235	92,122				

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

month	In a Molt		Completed a Molt		In a molt + Completed a Molt			Change
	2017	2018	2017	2018	2016	2017	2018	
Jan	1.7	1.9	15.7	16.3	23.8	17.4	18.2	0.8
Feb	2.2	2.9	15.3	15.8	23.5	17.5	18.7	1.2
Mar	2.4	1.8	15.2	15.9	22.1	17.6	17.7	0.1
Apr	1.7	1.8	15.6	15.3	22.1	17.3	17.1	-0.2
May	2.7	3.1	14.9	14.3	21.5	17.6	17.4	-0.2
Jun	2.4	3.0	14.9	14.8	21.1	17.3	17.8	0.5
Jul	2.4	2.3	15.4	15.2	20.2	17.8	17.5	-0.3
Aug	2.5	2.2	15.5	14.8	19.9	18.0	17.0	-1.0
Sep	3.5		15.4		19.2	18.9		
Oct	2.9		16.2		19.0	19.1		
Nov	2.0		16.8		18.6	18.8		
Dec	1.2		17.1		17.9	18.3		
8 Month Avg.	2.3	2.4	15.3	15.3	21.8	17.6	17.7	0.1
12 Month Avg.	2.3		15.7		20.7	18.0		

Source: USDA NASS Chickens and Eggs

SHELL EGGS BROKEN UNDER FEDERAL INSPECTION (MILLION CASES)

TABLE 5

month	2013	2014	2015	2016	2017	2018	% Change with respect to last year 2013-2017	
Jan	5.765	5.865	6.634	5.639	6.540	6.482	-0.9	6.5
Feb	5.374	5.325	5.746	5.484	6.192	5.904	-4.7	5.0
Mar	5.831	6.086	6.030	6.308	6.601	6.218	-5.8	0.8
Apr	5.950	6.205	6.061	6.255	6.126	6.403	4.5	4.6
May	5.820	6.514	5.533	6.576	6.547	6.922	5.7	11.7
Jun	6.118	6.532	6.408	6.679	6.604	6.891	4.3	6.5
Jul	6.266	6.618	5.641	6.474	6.376	6.788	6.5	8.2
Aug	6.200	6.596	5.589	6.804	6.603			
Sep	6.040	6.566	5.583	6.539	6.126			
Oct	6.289	6.731	5.814	6.636	6.583			
Nov	5.738	6.086	5.350	6.499	6.296			
Dec	5.745	6.281	5.749	6.498	6.306			
7 Month Avg.	5.875	6.164	6.008	6.202	6.427	6.515	1.4	6.2
7 Month Total	41.124	43.145	42.053	43.416	44.986	45.607		
12 Month Total	71.136	75.405	70.138	76.391	76.901			

Source: USDA NASS Egg products - monthly

Million Cases Produced
% BROKEN

245.515	231.279	247.874	255.895	150.124
30.7	30.3	30.8	30.1	30.4



PER CAPITA EGG CONSUMPTION BY QUARTER

TABLE 6

QUARTER	2011	2012	2013	2014	2015	2016	2017	2018*
1	61.3	63.2	64.2	65.6	65.6	67.4	68.5	68.2
2	61.5	62.2	63.3	66.2	63.0	66.3	68.6	69.0
3	62.8	63.3	64.6	67.2	61.5	67.3	69.3	69.5
4	64.3	65.6	66.1	68.5	65.6	70.6	69.9	71.8
Total	249.9	254.3	258.2	267.5	255.8	271.6	276.3	278.4

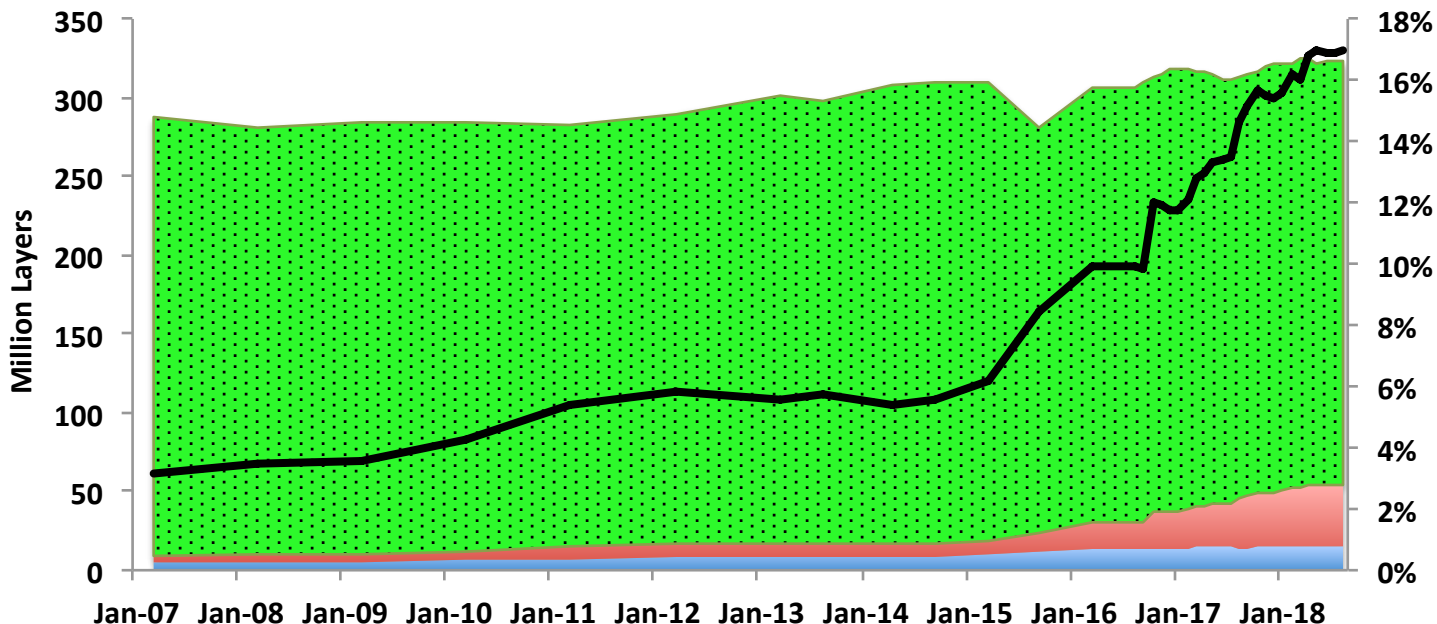
Change from previous year

4.4	3.9	9.3	-11.7	15.8	4.7	2.1
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Source: USDA ERS Livestock and Meat Trade Data.

* Estimates for 2018 (8/2018)

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
	2017	2018	2017	2018	2017	2018	Change (%)	
January	23.5	35.7	14.1	14.6	37.6	50.2	34%	15.6%
February	24.4	36.9	14.1	15.0	38.5	51.9	35%	16.2%
March	26.1	36.9	14.5	15.0	40.6	51.9	28%	16.0%
April	26.6	39.0	14.6	15.6	41.2	54.5	32%	16.8%
May	27.3	39.0	14.6	15.6	41.9	54.5	30%	16.9%
June	27.3	39.1	14.6	15.6	41.9	54.7	31%	16.9%
July	27.5	39.1	14.6	15.6	42.1	54.7	30%	16.9%
August	31.7	39.1	14.1	15.6	45.8	54.7	19%	16.9%
September	33.5		14.3		47.8			
October	34.7		14.7		49.4			
November	34.7		14.7		49.4			
December	35.0		14.7		49.7			

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).



EXPORT OF TABLE EGGS IN THE SHELL IN 2018 (Thousand cases- 30 doz)

TABLE 8

Month \ To	North America	Central America	Caribbean	European Union-28	East Asia	Southeast Asia	Middle East	Total 2018	Total 2017	% of U.S. Production
Jan	111.0	0.2	18.8	0.0	125.8	0.0	24.1	284.1	193.1	1.30
Feb	84.2	0.2	26.9	0.0	91.3	0.0	24.3	231.7	273.9	1.18
Mar	111.2	0.1	33.8	0.0	91.8	0.0	4.4	246.7	253.5	1.12
Apr	183.3	0.0	16.8	0.0	107.3	0.0	0.0	311.9	270.7	1.47
May	190.1	0.1	11.6	0.0	117.3	0.0	0.1	324.1	273.6	1.47
Jun	101.0	0.0	11.8	0.0	156.4	0.0	2.7	273.5	252.2	1.28
Jul	116.1	0.0	11.8	0.0	120.0	0.0	19.2	273.3	292.9	1.25
Aug									340.9	
Sep									396.8	
Oct									382.4	
Nov									285.2	
Dec									375.9	
7 Mo. Total	896.9	0.7	131.5	0.0	810.0	0.0	74.8	1,945.4	1,809.9	1.29
%	46.1	0.0	6.8	0.0	41.6	0.0	3.8			

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

EXPORT OF EGG PRODUCTS IN 2018 (EQUIVALENT: thousand cases- 30 doz)

TABLE 9

Month \ To	North America	Central America	Caribbean	European Union-28	East Asia	Southeast Asia	Middle East	Total 2018	Total 2017	% of U.S. Production
Jan	92.3	10.5	7.1	64.7	230.2	21.0	8.9	442.1	334.0	2.03
Feb	145.7	3.8	5.4	63.1	223.9	6.2	5.2	478.5	387.5	2.43
Mar	86.7	12.4	11.1	26.5	235.1	19.6	5.5	432.2	501.7	1.96
Apr	104.9	6.1	6.6	30.7	230.4	27.0	18.7	462.8	464.3	2.17
May	104.7	10.0	8.7	24.2	226.7	22.4	7.2	417.7	438.8	1.90
Jun	91.2	5.6	10.2	29.8	172.1	8.1	5.2	333.9	421.3	1.57
Jul	108.9	10.0	4.3	48.6	145.6	14.9	0.4	346.2	363.9	1.58
Aug									465.2	
Sep									434.7	
Oct									496.2	
Nov									562.5	
Dec									398.7	
7 Mo. Total	734.4	58.5	53.6	287.6	1,464.0	119.3	51.1	2,913.5	2,911.3	1.95
%	25.2	2.0	1.8	9.9	50.3	4.1	1.8			

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.

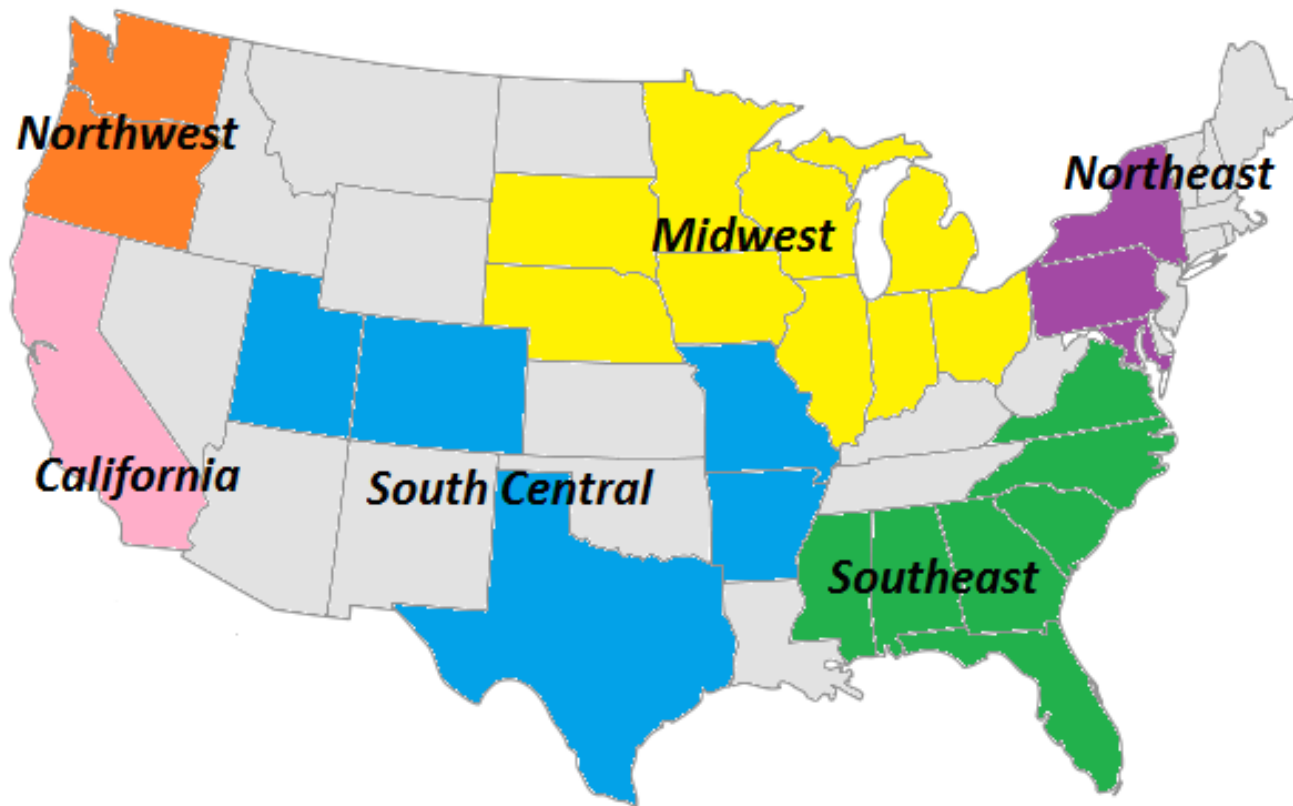
TOTAL EGGS EXPORTED - 2018

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	21,783		284.1	1.30	442.1	2.03	726.2	3.33
Feb	19,722		231.7	1.18	478.5	2.43	710.3	3.60
Mar	22,033		246.7	1.12	432.2	1.96	678.8	3.08
Apr	21,292		311.9	1.47	462.8	2.17	774.7	3.64
May	22,035		324.1	1.47	417.7	1.90	741.8	3.37
Jun	21,307		273.5	1.28	333.9	1.57	607.5	2.85
Jul	21,953		273.3	1.25	346.2	1.58	619.6	2.82
Aug								
Sep								
Oct								
Nov								
Dec								
Total/Av	150,124		1,945.4	1.30	2,913.5	1.94	4,858.8	3.24



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) - 2018

TABLE 11

month	Northeast	Southeast	South Central	Midwest	Northwest	California	U.S. Total
Jan	34.0	30.0	38.1	161.6	9.3	13.7	309.1
Feb	33.9	29.7	38.6	163.0	9.2	13.6	307.8
Mar	33.6	29.9	38.8	165.0	8.8	13.7	307.2
Apr	33.1	30.1	38.1	165.8	8.8	13.5	306.4
May	33.1	29.7	37.6	166.0	8.9	13.6	304.0
Jun	33.1	29.0	38.0	165.6	9.1	13.8	302.7
Jul	33.0	28.2	38.2	166.1	9.0	14.0	303.0
Aug							
Sep							
Oct							
Nov							
Dec							
7 Month Avg.	33.4	29.5	38.2	164.7	9.0	13.7	305.8
% of total	10.9	9.7	12.5	53.9	2.9	4.5	

Source: USDA NASS Chickens and Eggs



TABLE EGG LAYERS IN LEADING STATES - (LAYERS IN 30,000+ HEN FLOCKS) - 2018

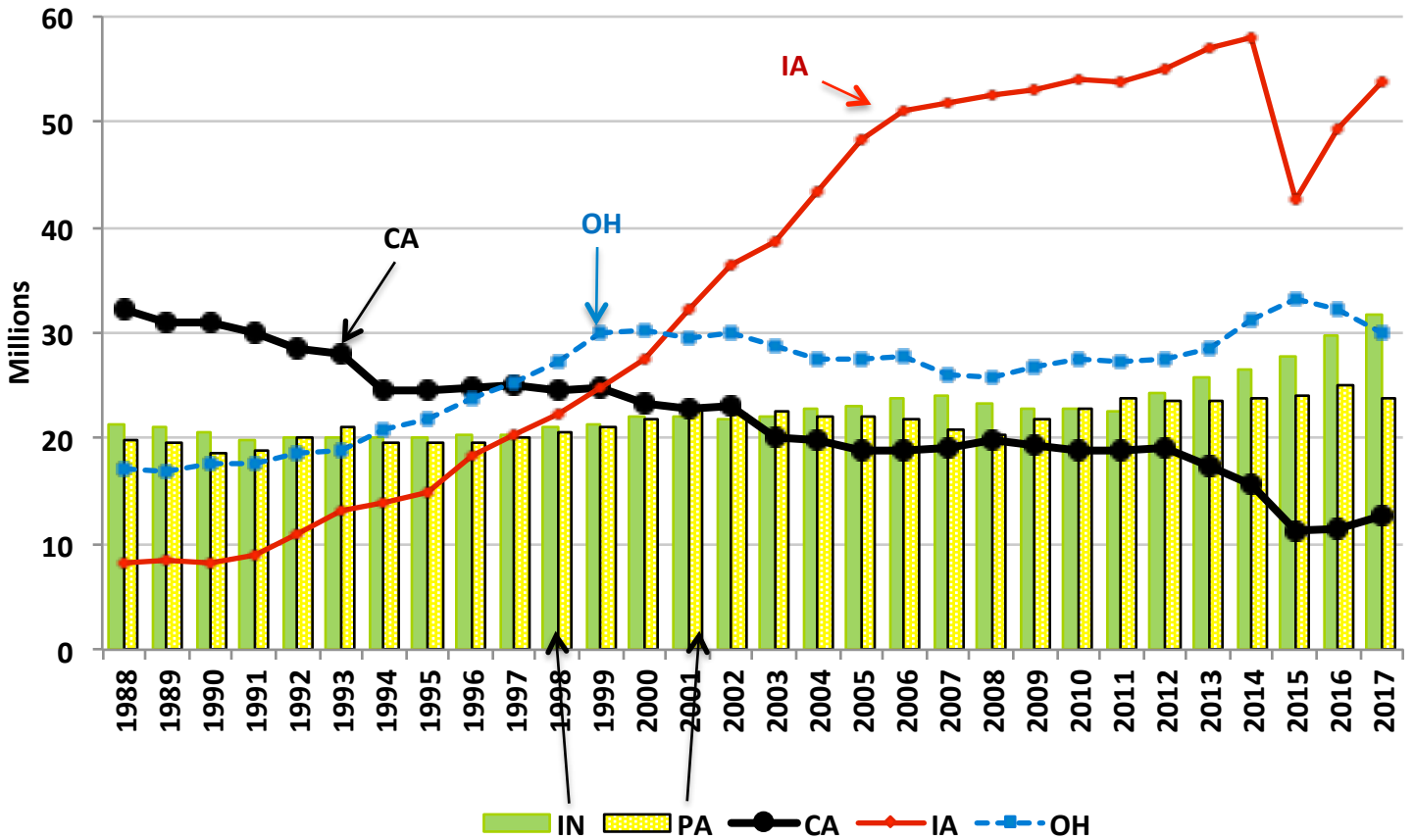
TABLE 12

month	IA	OH	IN	PA	CA	TX	U.S.
Jul-2017	53.47	29.61	31.54	23.53	12.81	17.08	302.99
(Millions)							
Jan-2018	54.18	30.91	31.23	24.92	13.72	17.72	311.66
Feb-2018	54.62	31.32	31.05	24.93	13.61	17.78	312.94
Mar-2018	55.31	31.47	31.30	24.98	13.68	17.78	314.80
Apr-2018	55.66	31.52	31.65	24.95	13.52	17.80	314.35
May-2018	56.05	31.25	31.79	24.98	13.59	17.81	313.79
Jun-2018	55.83	30.91	31.78	25.13	13.84	17.90	313.72
Jul-2018	56.11	30.93	31.83	25.11	13.97	17.90	313.46
Aug-2018							
Sep-2018							
Oct-2018							
Nov-2018							
Dec-2018							
7 Month Avg.	55.39	31.19	31.52	25.00	13.70	17.81	313.53

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, %) - 2018

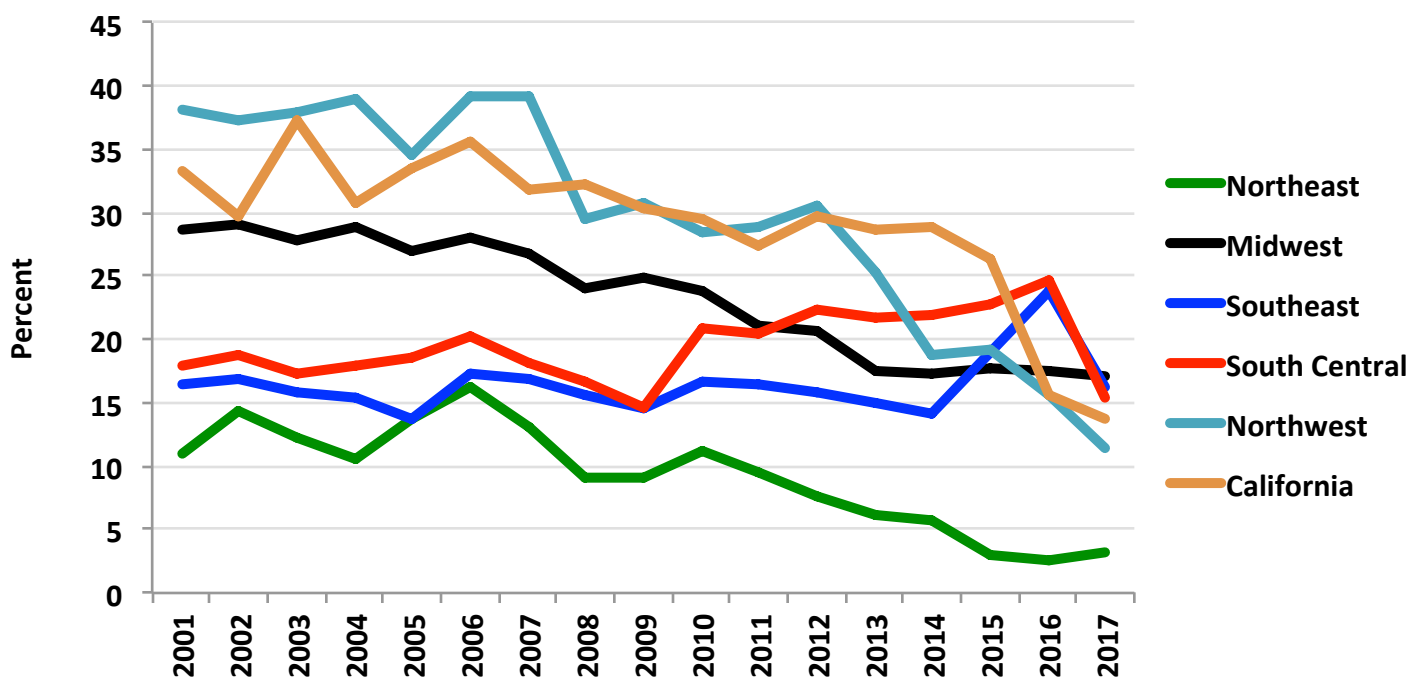
TABLE 13

month	Northeast	Southeast	South Central	Midwest	Northwest	California	U.S. Avg
Jan	3.7	16.9	15.1	18.4	12.0	15.0	18.2
Feb	3.2	17.9	17.6	18.6	13.0	15.0	18.7
Mar	3.0	15.8	14.9	17.6	13.3	12.5	17.7
Apr	3.3	14.8	13.9	16.4	10.5	12.0	17.1
May	4.2	15.7	13.7	16.9	8.8	14.0	17.4
Jun	3.2	16.0	15.4	17.1	10.5	13.5	17.8
Jul	2.7	16.4	16.0	16.4	12.0	13.5	17.5
Aug	2.5	15.9	16.8	15.4	11.5	14.5	17.0
Sep							
Oct							
Nov							
Dec							
8 Month Avg.	3.2	16.2	15.4	17.1	11.4	13.8	17.7
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	2013	2014	2015	2016	2017	2018	2019
Jan	2.579	2.540	2.682	3.081	2.581	2.741	2.206
Feb	2.613	2.536	2.689	3.074	2.598	2.768	2.078
Mar	2.630	2.472	2.605	2.997	2.742	2.604	
Apr	2.588	2.530	2.718	2.840	2.705	2.613	
May	2.515	2.497	2.917	2.805	2.699	2.498	
Jun	2.537	2.439	2.892	2.866	2.747	2.389	
Jul	2.436	2.608	2.797	2.836	2.696	2.498	
Aug	2.515	2.535	2.797	2.725	2.764	2.506	
Sep	2.503	2.553	2.857	2.615	2.755	2.482	
Oct	2.468	2.610	2.958	2.446	2.782	2.477	
Nov	2.555	2.619	2.937	2.566	2.685	2.450	
Dec	2.476	2.664	2.947	2.650	2.659	2.360	
2 month avg.	2.596	2.538	2.685	3.078	2.589	2.755	2.142
12 month avg.	2.535	2.550	2.816	2.792	2.701	2.532	

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	23.1	19.7
Apr	16.5	18.9	16.5	20.7	18.8	21.7	18.3
May	18.5	18.6	18.2	21.1	20.6	20.7	19.4
Jun	19.1	19.4	18.0	20.9	19.6	22.8	19.4
Jul	21.1	20.6	20.7	27.1	24.2	25.1	22.7
Aug	19.7	20.2	21.4	25.7	25.0	26.2	22.4
Sep	20.8	20.9	21.4	23.1	23.5	26.6	22.0
Oct	22.6	22.4	21.8	25.9	23.9	27.1	23.3
Nov	19.1	20.0	21.3	26.0	22.0	24.1	21.7
Dec	18.0	19.2	19.3	18.8	18.7	22.9	18.8
12 month avg.	19.0	19.5	19.6	22.9	21.2	23.2	20.4
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

9.55

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).



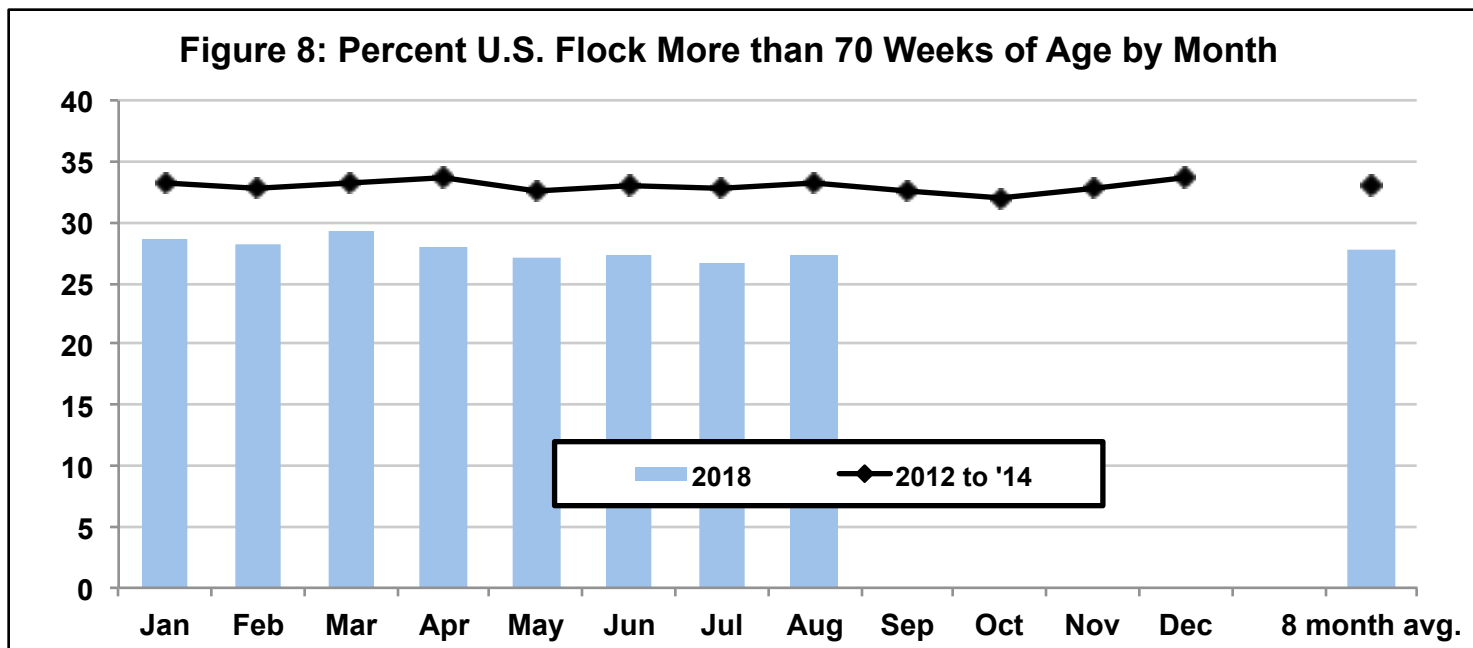
PROJECTED U.S. TABLE EGG FLOCK MORE THAN 70 WEEKS OF AGE (% of layers)

TABLE 16

	% of National Flock over 70 weeks of age (on the 1st of the month)						
	2013	2014	2015	2016	2017	2018	2012 to '14
Jan	34.1	33.1	32.2		22.5	28.6	33.3
Feb	34.1	31.8	31.1		23.1	28.3	32.9
Mar	34.9	31.8	32.0		23.5	29.3	33.3
Apr	34.9	32.5			23.9	27.9	33.6
May	33.5	32.2			24.1	27.1	32.7
Jun	33.8	32.2			23.8	27.2	33.0
Jul	33.7	32.4			25.1	26.8	32.9
Aug	33.7	33.4			26.5	27.3	33.2
Sep	32.7	32.5			26.4		32.5
Oct	31.4	32.1			27.4		32.0
Nov	32.6	31.5		22.7	28.8		32.9
Dec	33.2	32.8		21.8	28.4		33.6
8 month avg.	34.1	32.4			24.1	27.8	33.1
12 month avg.	33.6	32.4	31.7		25.3		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:

- 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: $0.0643 + 0.00415 * \text{Price } 12-18_ \text{Jan} + 0.00149 * \text{Price } 12-18_ \text{Feb} + 0.00439 * \text{Price } 12-18_ \text{Mar} + 0.00203 * \text{Price } 12-18_ \text{Apr} + 0.00465 * \text{Price } 12-18_ \text{May} + 0.00601 * \text{Price } 12-18_ \text{Jun} + 0.0115 * \text{Price } 12-18_ \text{Jul} + 0.01208 * \text{Price } 12-18_ \text{Aug} + 0.01238 * \text{Price } 12-18_ \text{Sep} + 0.01298 * \text{Price } 12-18_ \text{Oct} + 0.00766 * \text{Price } 12-18_ \text{Nov} + 0.00231 * \text{Price } 12-18_ \text{Dec} - 0.0004 * \text{"MOLT - previous 12-mo"}$

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

Adjusted R²=0.68

- 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: $0.678 * \text{Added /Beg. count} + 0.00347 * \text{Jan} - 0.0027 * \text{Feb} - 0.00078 * \text{Mar} + 0.00739 * \text{Apr} + 0.00357 * \text{May} + 0.0015 * \text{Jun} + 0.00063 * \text{Jul} - 0.00443 * \text{Aug} - 0.00214 * \text{Sep} - 0.00555 * \text{Oct} - 0.011 * \text{Nov} + 0.02112 * \text{Shock_ Sep} + 0.00270 * \text{"CPI adjusted Shell \$ under 0.65"}$

... 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_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 R²=0.53

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

TABLE 17

Actual	Actual	Actual	Actual	Actual	Actual	Projected	Projected	Projected	Projected	Projected	Projected
2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
322.0	320.8	324.6	324.5	323.7	323.4	323.5	322.9	326.4	329.3	333.5	338.4

Project. Year end: **Dec, 2018 - 339.2**

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



Date calculated: 8/1/2018

2018 Bird Flow by Month

Table 18

ACTUAL FLOCK (million birds)				
month	Beginning Count	Pullets added ¹	Slaughter, Died & Missing	Ending count
Jan-18	322.0	20.5	21.7	320.8
Feb-18	320.8	17.8	14.0	324.6
Mar-18	324.6	23.1	23.2	324.5
Apr-18	324.5	21.7	22.5	323.7
May-18	323.7	20.7	21.0	323.4
Jun-18	323.4	22.8	22.7	323.5
Jul-18	323.5	25.1	25.7	322.9
Aug-18	322.9	26.2		
Sep-18		26.6		
Oct-18		27.1		
Nov-18		24.1		
Dec-18		22.9		
Jan-19				
Feb-19				
Mar-19				
Apr-19				
May-19				
Jun-19				
Jul-19				
Aug-19				
Sep-19				
Oct-19				
Nov-19				
Dec-19				

¹ at 5 months of age

Table 19

PROJECTED FLOCK (million birds)				
month	Beginning Count	Pullets added ¹	Slaughter, Died & Missing	Ending count
Jan-18	322.0	20.5	21.7	320.8
Feb-18	320.8	17.8	14.0	324.6
Mar-18	324.6	23.1	23.2	324.5
Apr-18	324.5	21.7	22.5	323.7
May-18	323.7	20.7	21.0	323.4
Jun-18	323.4	22.8	22.7	323.5
Jul-18	323.5	25.1	25.7	322.9
Aug-18	322.9	26.2	22.7	326.4
Sep-18	326.4	26.6	23.7	329.3
Oct-18	329.3	27.1	23.0	333.5
Nov-18	333.5	24.1	19.2	338.4
Dec-18	338.4	22.9	22.1	339.2
Jan-19	339.2	21.3	23.1	337.3
Feb-19	337.3	20.0	20.1	337.2
Mar-19	337.2	21.7	21.0	337.8
Apr-19	337.8	20.5	23.9	334.4
May-19	334.4	21.7	23.3	332.8
Jun-19	332.8	22.1	22.9	332.0
Jul-19	332.0			
Aug-19				
Sep-19				
Oct-19				
Nov-19				
Dec-19				

¹ at 5 months of age

Actual number



2018 U.S. Flock Size: EIC Projections and USDA Reported Numbers

Table 20

EIC projected	USDA preliminary	USDA actual count
---------------	------------------	-------------------

For August 2018

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	321.4	322.0										
Feb-17	320.7	320.3	320.8									
Mar-17	320.1	320.6	324.3	324.6								
Apr-17	321.6	322.1	325.6	324.2	324.5							
May-17	319.0	319.5	323.0	322.5	322.1	323.7						
Jun-17	317.5	318.0	321.3	320.8	321.4	323.4	323.4					
Jul-17	316.3	317.8	321.0	320.6	321.1	323.9	323.6	323.5				
Aug-17	316.7	318.2	322.7	322.2	322.7	325.5	325.2	322.9				
Sep-17	318.8	319.4	323.9	324.9	326.3	328.1	327.8	326.4				
Oct-17	320.3	320.9	325.5	326.4	329.2	331.0	330.7	329.3				
Nov-17	323.0	323.6	327.4	328.3	331.1	334.2	333.9	333.5				
Dec-17	326.3	327.7	331.5	332.5	335.3	338.5	338.9	338.4				
Jan-18		327.7	331.5	332.4	335.2	338.4	338.9	339.2				
Feb-18			330.5	330.6	333.4	336.6	337.0	337.3				
Mar-18				330.5	333.3	336.4	336.9	337.2				
Apr-18					333.9	336.2	336.6	337.8				
May-18						332.8	333.2	334.4				
Jun-18							331.6	332.8				
Jul-18								332.0				
Aug-18												
Sep-18												
Oct-18												
Nov-18												
Dec-18												

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



Figure 9: U.S. Monthly Table-Egg Layers (2008-2018)

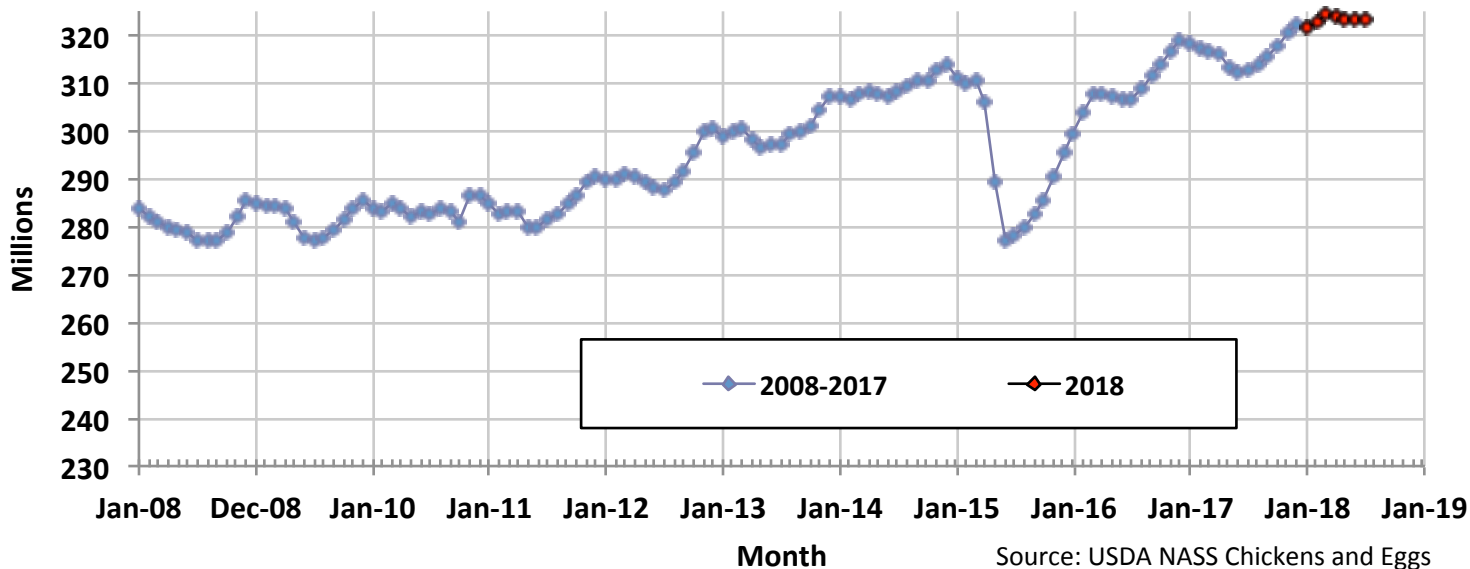


Figure 10: U.S. Table Eggs per Hundred Hens per Day by Month (2008-2018)



Figure 11: Monthly Percent of U.S. Flock Molted (2008-2018)

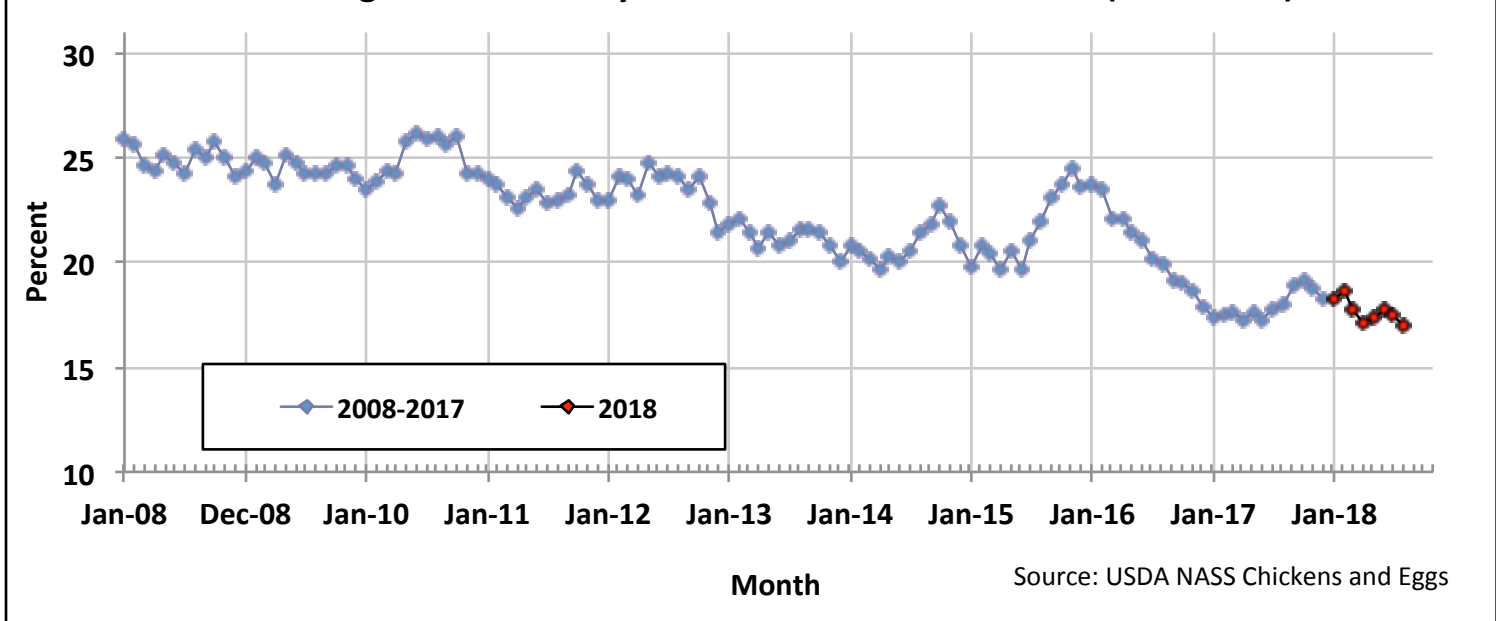
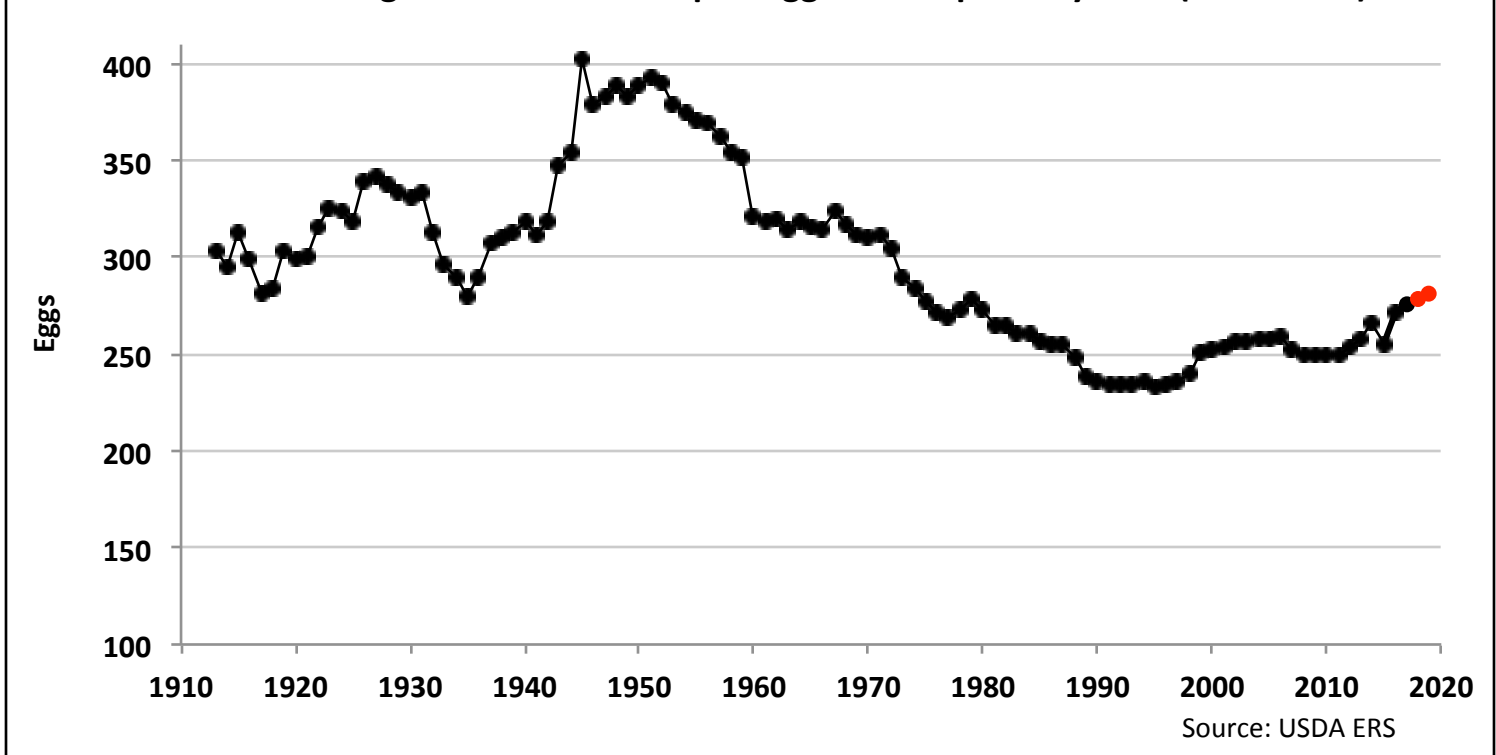


Figure 12: U.S. Per Capita Egg Consumption by Year (1913-2019)



SUMMARY TO DATE

Table 21

		2017	2018	% Change
HATCH of EGG-TYPE STRAIGHT RUN (THOUSANDS) (U.S.) (Total)	Jan to Jul	49,173	54,842	11.5
TABLE-EGG LAYERS (MILLIONS) (U.S.) (Avg.)	Jan to Jul	315.2	323.3	2.6
TABLE EGGS (MILLIONS/MONTH) (U.S.) (Avg.)	Jan to Jul	7,644	7,721	1.0
RATE OF LAY (%) (Avg.)	Jan to Jul	80.1	78.8	-1.3
U.S. TABLE EGG AVG. CASES/WEEK (THOUSANDS)	Jan to Jul	1,767	1,784	1.0
AVG MONTHLY CASES OF EGGS BROKEN (MILLION) (U.S.)	Jan to Jul	6.427	6.515	1.4
		2016	2017	Difference
PERCENT OF U.S. FLOCK IN or POST MOLT (Avg.)	Jan to Aug	17.6	17.7	0.1
AVERAGE PULLETS ADDED/MONTH (MILLIONS) (U.S.)	Jan to Dec	21.2	23.2	2.0

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 Report <https://www.ams.usda.gov/mnreports/pymcagefree.pdf>

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