

U.S. Flock Trends and Projections

December 7, 2018



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 October hatch (straight-run chicks) was 7.4% higher than October 2017. This projects forward to a 24.8 million pullet placement for March of 2019 which is 1.7 million higher than March of 2018 placement (23.1).

* Current (October average, 2018) U.S. table egg layer number (325.3 million) is 2.4 percent larger than last year's number at this time (317.8 million), and 0.4 million larger than last month (324.9 million).

* In October, Iowa led the nation with 56.4 million laying hens compared to 31.8 million in Ohio, 31.8 million in Indiana, and 25.2 million in Pennsylvania. California (with 13.9 million layers) lost it's 5th position to Texas with 17.7 million layers.

* The November 1st U.S. rate of lay was 79.8% which is 0.8% higher than November 1st 2017 level. The total number of table eggs produced in October 2018 was 3.5% higher than the October 2017 production.

* The October 2018 number of eggs exported was 14% lower than last year (October 2017) and 11% higher than last month (September 2018). The October exports represented 3.4% of the number of eggs produced.

* Shell eggs broken for products in October 2018 totaled 7.027 million cases, 6.7% more than in October 2017 (6.583 million cases).

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

	2017	2018	% Change
Hatch - Egg-Type Straight Run (thousands) (U.S.)	51,239	55,019	7.4
Table Egg Layers (millions) (U.S.)	317.8	325.3	2.4
Rate of lay (percent)	78.5	79.5	1.0
Molting (November 1, 2018) (percent in + out of a molt)	18.8	16.5	-12.2

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	331.5*

* preliminary value

SPECIAL NOTE:

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



TABLE OF CONTENTS

Table Name	Table #	Page	Sheet or Section
Egg Type: U.S. Eggs In Incubators and Straight Run Hatch	1	3	U.S. Volume
Average U.S. Table Egg Layers	2	3	U.S. Volume
U.S. Table Eggs and Rate of Lay	3	4	U.S. Volume
Induced Molt Percent - U.S. Totals (1st of Month)	4	5	U.S. Volume
Shell Eggs Broken Under Federal Inspection	5	5	U.S. Volume
Per Capita Egg Consumption by Quarter	6	6	U.S. Volume
Cage-Free Layers	7	6	U.S. Volume
Export of Table Eggs In the Shell In 2018	8	7	Trade
Export of Egg Products In 2018	9	7	Trade
Total Eggs Exported - 2018	10	7	Trade
Table Egg Layers In Flocks 30,000 and Above by Region - 2018	11	8	Regional
Table Egg Layers In Flocks 30,000 and Above In Leading States (Average) - 2018	12	9	Regional
Total molt (in-molt plus post-molt) by region - 2018	13	10	Regional
Projected U.S. Egg-Type Hatchery Supply Flock - 2018	14	11	Projections
U.S. Pullets to be Housed Based Upon Hatch 5 Month Ago	15	11	Projections
Projected U.S. Table Egg Flock Less Than 70 Weeks of Age	16	12	Projections
First of the Month Projection Estimates of U.S. Table Egg Layers (millions)	17	13	Projection
Actual First of the Month (U.S. Flock Size) - 2018	18	14	Projected Flock
Projected First of the Month (U.S. Flock Size) - 2018	19	14	Projected Flock
2018 United States Flock Size Previous Projections	20	15	Previous Projections
Summary to Date	21	18	Final

Figure Name	Figure #	Page	Sheet or Section
Egg-Type Hatch Straight Run by Month (1,000)	1	3	U.S. Volume
Table Egg Layers by Month (Millions)	2	3	U.S. Volume
Rate of Lay (Percent)	3	4	U.S. Volume
Monthly Percent Molted	4	4	U.S. Volume
Total Cage-Free and Conventional Layers (Millions)	5	6	U.S. Volume
Leading States' Table Egg Layers In Flocks of 30,000 and Above (1988-2016)	6	9	Regional
Percent of layers with molt completed by region	7	10	Regional
Percent of U.S. Flock More Than 70 Weeks of Age by Month	8	12	Projections
U.S. Monthly Table-Egg Layers (2008-2018)	9	16	Trends
U.S. Table Eggs per Hen per Day by Month (2008-2018)	10	16	Trends
Monthly Percent of U.S. Flock Molted (2008-2018)	11	17	Trends
U.S. Per Capita Egg Consumption by Year (1913-2018)	12	17	Trends

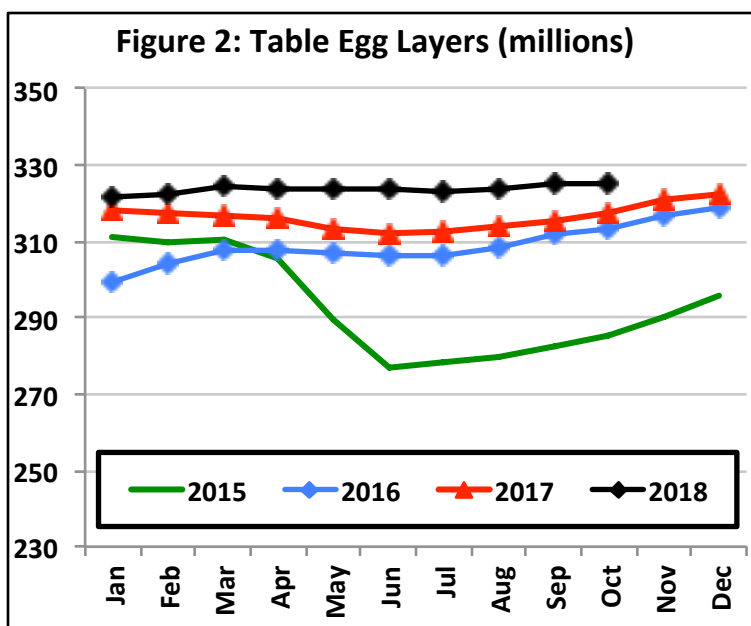
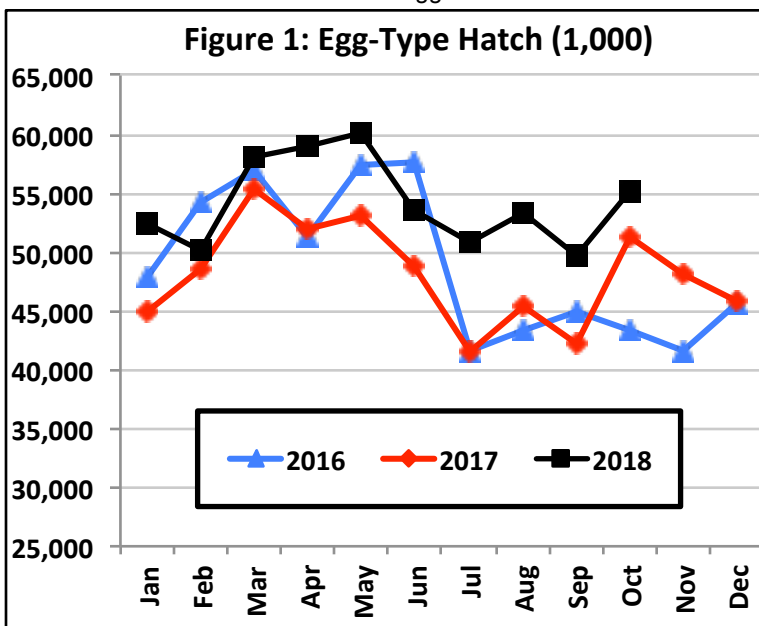


EGG TYPE: EGGS IN INCUBATORS (on the 1st of the month) and STRAIGHT RUN HATCH (U.S.)

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	46,678	16.3	Aug	43,258	45,439	53,207	17.1
Sep	40,068	50,036	24.9	Sep	44,892	42,271	49,610	17.4
Oct	46,262	51,647	11.6	Oct	43,344	51,239	55,019	7.4
Nov	44,949	45,237	0.6	Nov	41,648	47,999		
Dec	46,495			Dec	45,633	45,846		
11 Month Avg.	45,255	50,605	11.8	10 Month Avg.	49,836	48,316	54,173	12.1
11 Month Total	497,806	556,650		10 Month Total	498,356	483,157	541,731	
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	3.4	7.5
Aug	299.4	309.6	279.7	308.6	313.8	323.8	3.2	7.1
Sep	300.1	310.4	282.4	311.7	315.5	324.9	3.0	6.9
Oct	301.1	310.7	285.6	313.6	317.8	325.3	2.4	6.4
Nov	304.5	312.7	290.2	316.7	320.7			
Dec	307.1	313.8	295.6	319.0	322.1			
10 Month Avg.	298.8	308.3	292.9	307.2	315.3	323.7	2.7	6.3
Annual Avg.	300.0	309.2	292.9	309.0	316.3			

Source: USDA NASS Chickens and Eggs



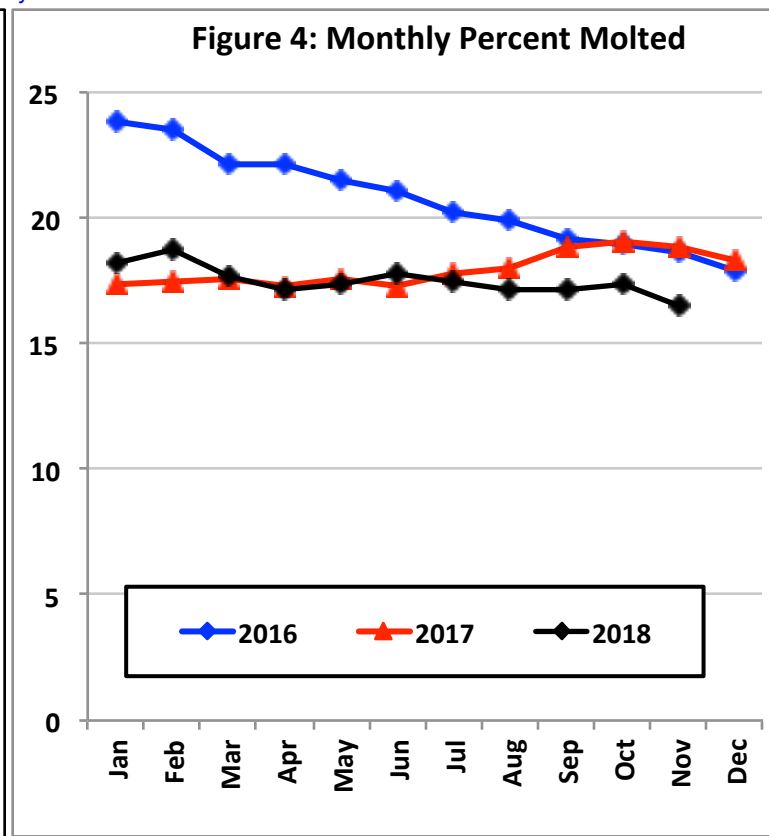
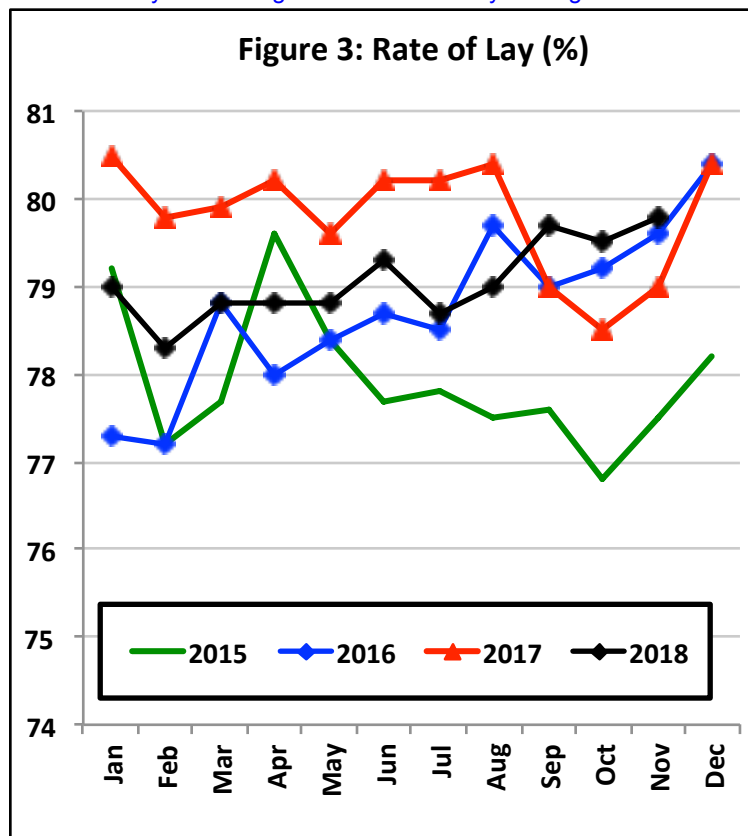
U.S. TABLE EGGS, AND RATE OF LAY on the 1st of EACH MONTH (ALL STATES)

TABLE 3

month	Table Eggs - human consumption (millions)					Change (%)	Rate of Lay (Table)	
	2014	2015	2016	2017	2018		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	7,901	1.5	80.2	78.7
Aug	7,497	6,729	7,597	7,755	7,968	2.7	80.4	79.0
Sep	7,230	6,544	7,402	7,457	7,760	4.1	79.0	79.7
Oct	7,539	6,837	7,724	7,763	8,035	3.5	78.5	79.5
Nov	7,465	6,778	7,602	7,676			79.0	79.8
Dec	7,746	7,125	7,954	7,964			80.4	
YTD Avg.	7,317	6,936	7,368	7,648	7,781	1.7	79.8	79.1
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	2.3	15.5	14.9	19.9	18.0	17.2	-0.8
Sep	3.5	2.6	15.4	14.6	19.2	18.9	17.2	-1.7
Oct	2.9	2.2	16.2	15.2	19.0	19.1	17.4	-1.7
Nov	2.0	1.5	16.8	15.0	18.6	18.8	16.5	-2.3
Dec	1.2		17.1		17.9	18.3		
11 Month Avg.	2.4	2.3	15.5	15.2	21.0	17.9	17.5	-0.4
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	6.770	6.2	7.9
Aug	6.200	6.596	5.589	6.804	6.603	7.110	7.7	11.8
Sep	6.040	6.566	5.583	6.539	6.126	6.793	10.9	10.1
Oct	6.289	6.731	5.814	6.636	6.583	7.027	6.7	9.6
Nov	5.738	6.086	5.350	6.499	6.296			
Dec	5.745	6.281	5.749	6.498	6.306			
10 Month Avg.	5.965	6.304	5.904	6.340	6.430	6.652	3.5	7.5
10 Month Total	59.653	63.038	59.039	63.395	64.299	66.518		
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	216.126
30.7	30.3	30.8	30.1	30.8



PER CAPITA EGG CONSUMPTION BY QUARTER

TABLE 6

QUARTER	2012	2013	2014	2015	2016	2017	2018*	2019*
1	63.2	64.2	65.6	65.6	67.4	68.5	68.2	68.9
2	62.2	63.3	66.2	63.0	66.3	68.6	68.9	68.9
3	63.3	64.6	67.2	61.5	67.3	69.3	70.2	69.7
4	65.6	66.1	68.5	65.6	70.6	69.9	72.2	69.7
Total	254.3	258.2	267.5	255.8	271.6	276.3	279.5	280.1

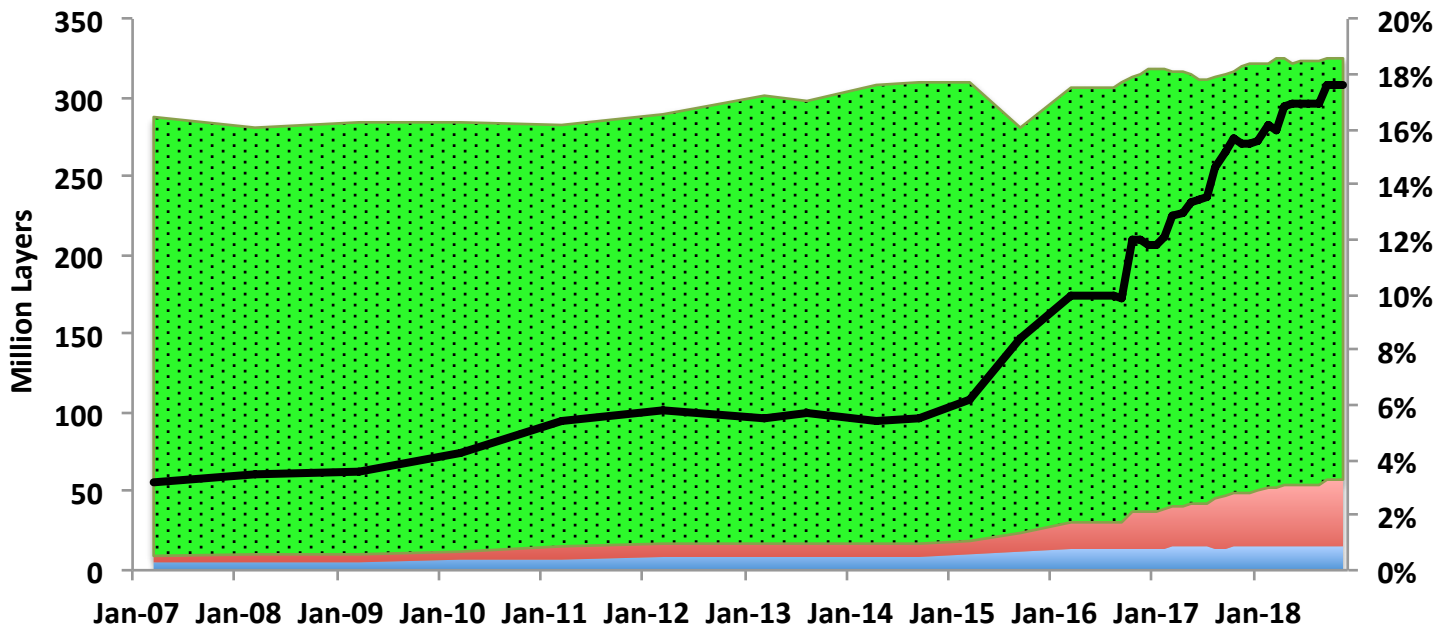
Change from previous year

3.9	9.3	-11.7	15.8	4.7	3.2	0.6
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Source: USDA ERS Livestock and Meat Trade Data.

* Estimates for 2018 & 2019 (10/2018)

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



Organic Total cage-free Conventional % cage-free

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	41.4	14.3	15.7	47.8	57.1	19%	17.6%
October	34.7	41.5	14.7	15.7	49.4	57.2	16%	17.6%
November	34.7	41.5	14.7	15.7	49.4	57.2	16%	17.6%
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	181.4	0.0	10.0	0.0	138.4	0.0	39.7	373.8	340.9	1.69
Sep	191.3	0.0	8.7	0.0	145.2	0.0	14.1	363.2	396.8	1.69
Oct	252.0	0.0	14.0	0.0	187.5	0.0	11.9	471.1	382.4	2.11
Nov									285.2	
Dec									375.9	
10 Mo. Total	1,521.6	0.8	164.2	0.0	1,281.1	0.0	140.5	3,153.4	2,929.9	1.45
%	48.3	0.0	5.2	0.0	40.6	0.0	4.5			

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	97.3	15.8	6.0	38.4	139.1	10.4	4.9	323.1	465.2	1.46
Sep	94.7	4.4	12.0	55.2	124.8	13.8	6.2	315.9	434.7	1.47
Oct	88.2	5.6	8.6	36.3	115.0	22.3	1.8	286.1	496.2	1.28
Nov									562.5	
Dec									398.7	
10 Mo. Total	1,014.6	84.3	80.2	417.5	1,843.0	165.8	64.1	3,838.6	4,307.5	1.78
%	26.4	2.2	2.1	10.9	48.0	4.3	1.7			

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.

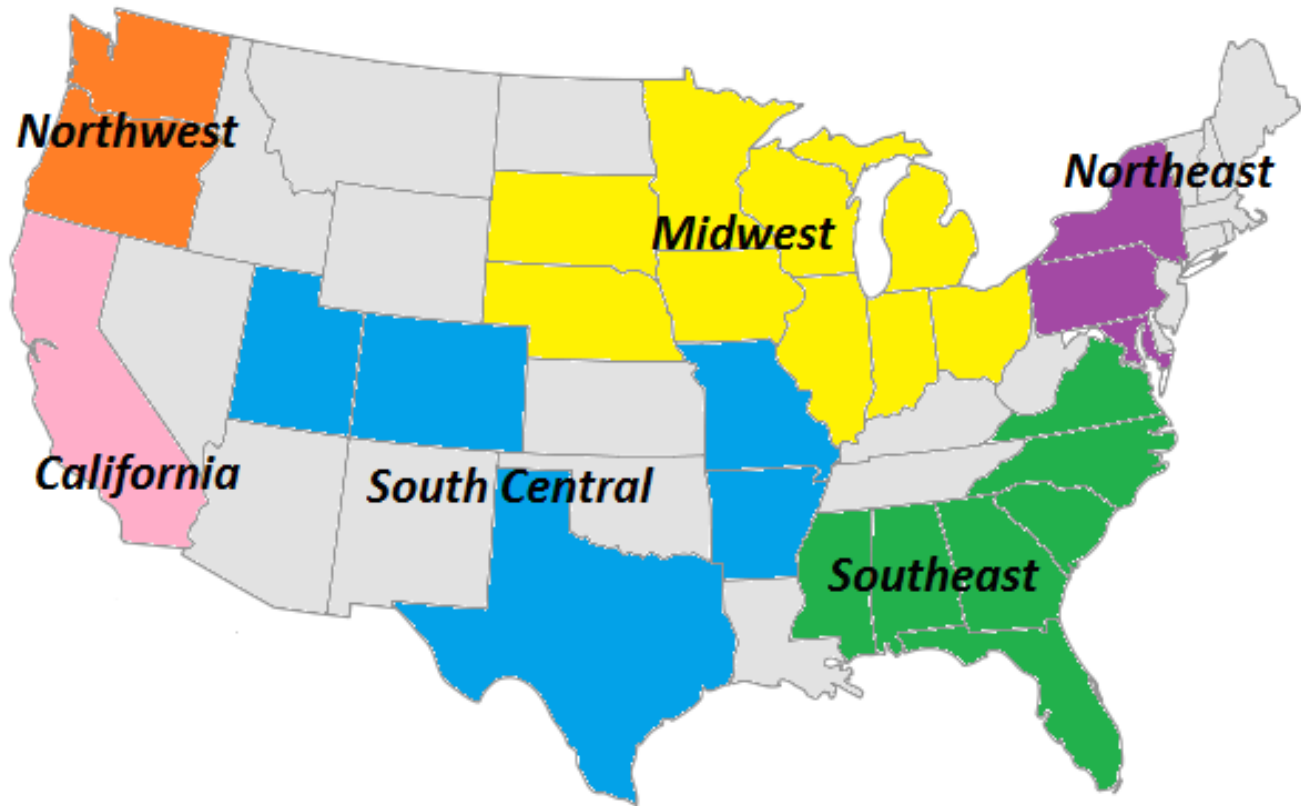
TOTAL EGGS EXPORTED - 2018

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	21,946		273.3	1.25	346.2	1.58	619.6	2.82
Aug	22,133		373.8	1.69	323.1	1.46	696.9	3.15
Sep	21,555		363.2	1.69	315.9	1.47	679.1	3.15
Oct	22,320		471.1	2.11	286.1	1.28	757.1	3.39
Nov								
Dec								
Total/Av	216,126		3,153.4	1.46	3,838.6	1.78	6,992.0	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	33.0	27.6	38.0	167.3	8.9	13.9	304.4
Sep	33.3	27.3	38.3	168.0	9.0	14.0	306.1
Oct	33.5	27.5	38.5	168.0	9.0	13.9	308.3
Nov							
Dec							
10 Month Avg.	33.3	28.9	38.2	165.6	9.0	13.8	305.9
% of total	10.9	9.5	12.5	54.1	2.9	4.5	

Source: USDA NASS Chickens and Eggs



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

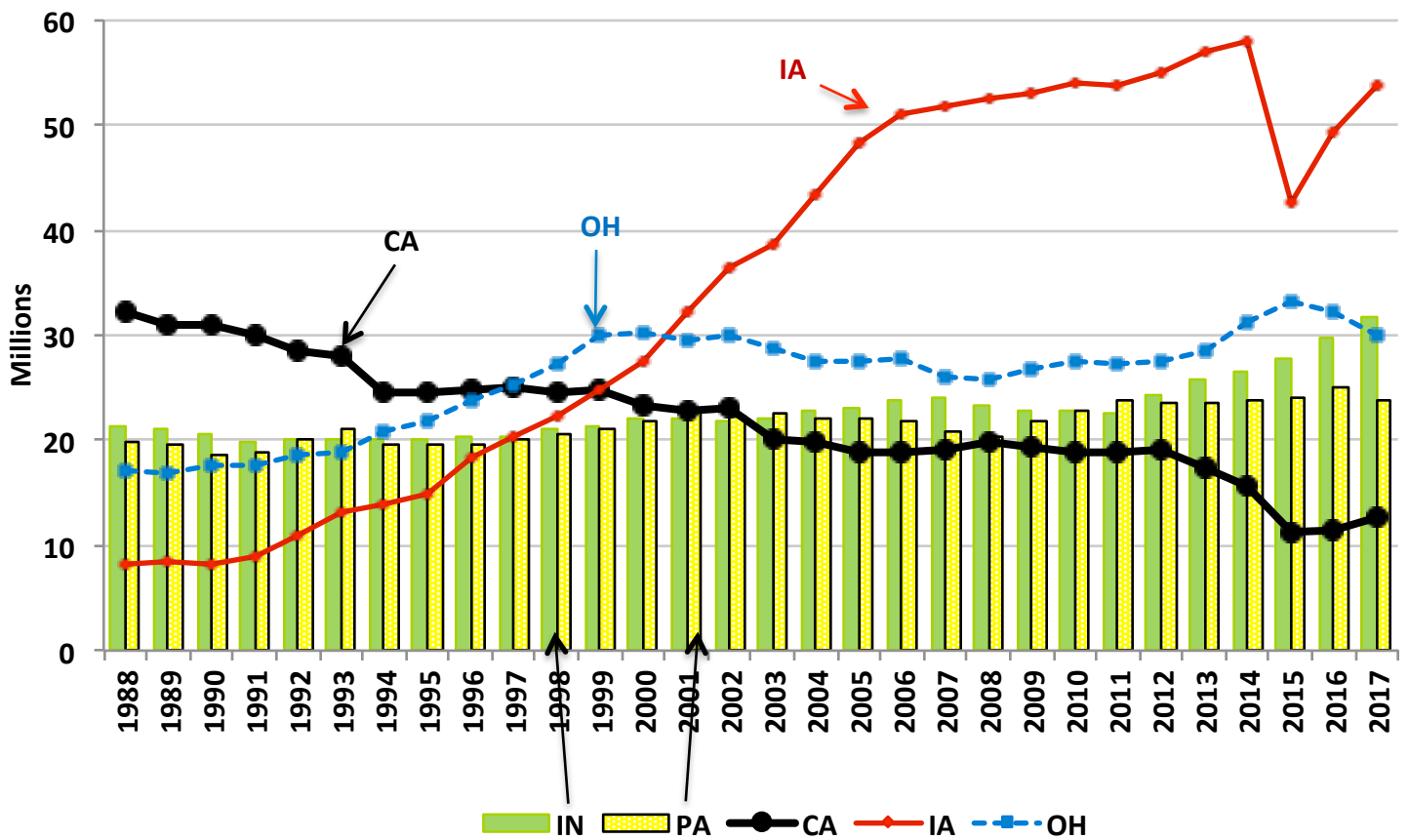
TABLE 12

month	IA	OH	IN	PA	CA	TX	U.S.
Oct-2017	54.11	30.28	32.13	24.01	13.86	17.64	308.34
(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	313.42
Aug-2018	56.40	31.26	31.90	25.22	13.95	17.72	314.06
Sep-2018	56.42	31.65	31.89	25.31	14.00	17.70	315.16
Oct-2018	56.39	31.81	31.78	25.20	13.85	17.72	315.53
Nov-2018							
Dec-2018							
10 Month Avg.	55.70	31.30	31.62	25.07	13.77	17.78	313.94

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

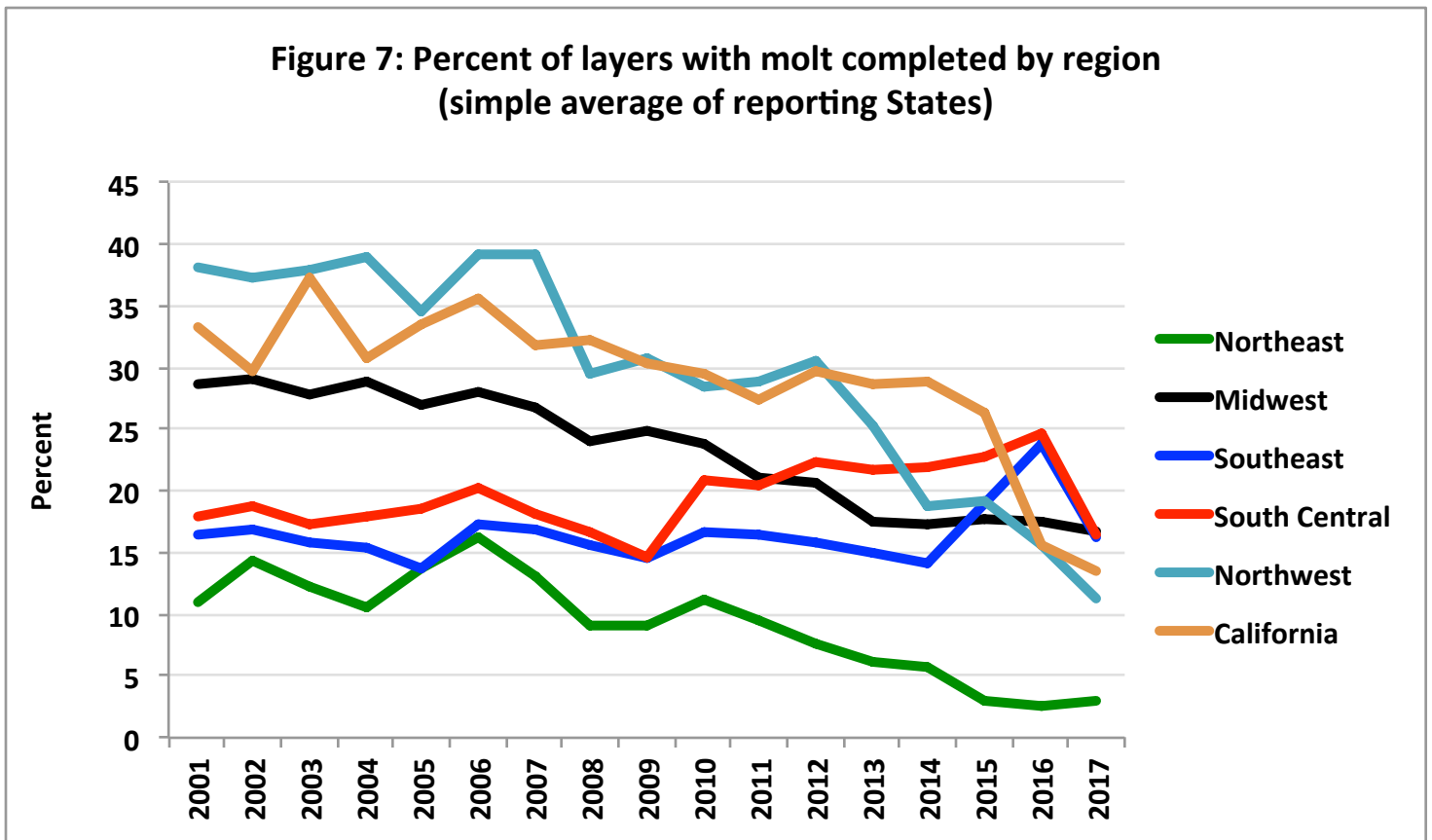
TABLE 13

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	16.8	17.0	15.7	13.0	14.0	17.2
Sep	2.3	15.3	18.7	16.1	10.5	14.0	17.2
Oct	2.8	16.4	19.7	16.0	10.5	13.0	17.3
Nov	1.5	15.8	18.6	14.9	10.3	12.0	16.5
Dec							
11 Month Avg.	2.9	16.2	16.4	16.7	11.3	13.5	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	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	2.122
Apr	2.588	2.530	2.718	2.840	2.705	2.613	2.120
May	2.515	2.497	2.917	2.805	2.699	2.498	2.145
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	
5 month avg.	2.585	2.515	2.722	2.959	2.665	2.645	2.134
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)
(47.5% of CHICKS PLACED multiplied by a 95% LIVABILITY FACTOR)

TABLE 15

month	2014	2015	2016	2017	2018	2019	2014 to '18 month avg.
Jan	17.5	17.9	21.3	19.5	20.5	24.0	19.3
Feb	17.8	18.4	21.5	18.9	17.8	20.9	18.9
Mar	19.2	20.2	22.7	19.6	23.1	24.8	20.9
Apr	18.9	16.5	20.7	18.8	21.7		19.3
May	18.6	18.2	21.1	20.6	20.7		19.8
Jun	19.4	18.0	20.9	19.6	22.8		20.1
Jul	20.6	20.7	27.1	24.2	25.1		23.5
Aug	20.2	21.4	25.7	25.0	26.2		23.7
Sep	20.9	21.4	23.1	23.5	26.6		23.1
Oct	22.4	21.8	25.9	23.9	27.1		24.2
Nov	20.0	21.3	26.0	22.0	24.1		22.7
Dec	19.2	19.3	18.8	18.7	22.9		19.8
3 month avg.	18.1	18.8	21.8	19.3	20.5	23.2	19.7
Annual Avg.	19.5	19.6	22.9	21.2	23.2		21.3
Total	234.6	235.1	274.7	254.4	278.7		255.5

Source: USDA NASS Chickens and Eggs

% Change to date

13.51

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).



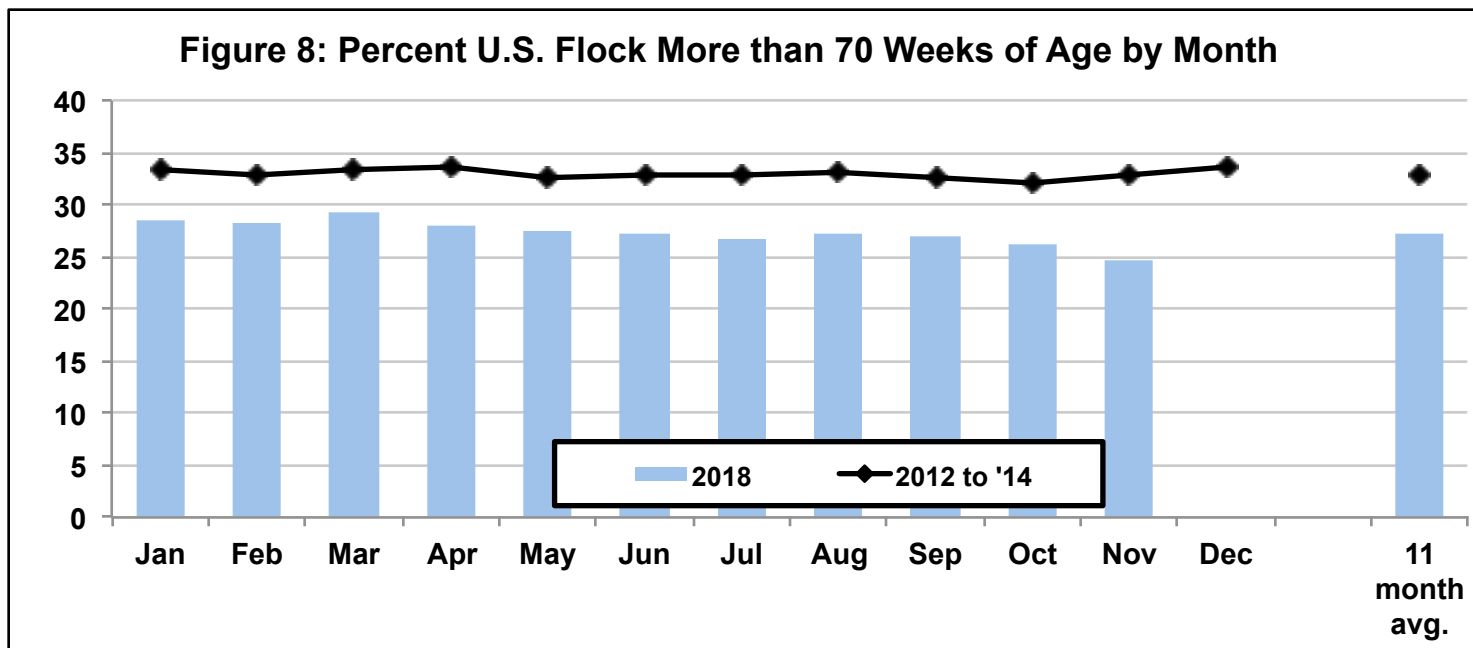
PROJECTED U.S. TABLE EGG FLOCK MORE THAN 70 WEEKS OF AGE (% of layers)

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	27.4	32.7
Jun	33.8	32.2			23.8	27.2	33.0
Jul	33.7	32.4			25.1	26.7	32.9
Aug	33.7	33.4			26.5	27.3	33.2
Sep	32.7	32.5			26.4	26.9	32.5
Oct	31.4	32.1			27.4	26.2	32.0
Nov	32.6	31.5		22.7	28.8	24.8	32.9
Dec	33.2	32.8		21.8	28.4		33.6
11 month avg.	33.6	32.3			25.0	27.3	32.9
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:

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

... 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

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

... 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	Actual	Actual	Actual	Actual	Actual	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	322.8	324.8	325.0	325.6	330.6

Project. Year end: **Dec, 2018 - 331.5**

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



Date calculated: 12/1/2018

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	25.8	322.8
Aug-18	322.8	26.2	24.2	324.8
Sep-18	324.8	26.6	26.4	325.0
Oct-18	325.0	27.1	22.9	325.6
Nov-18	325.6	24.1		
Dec-18		22.9		
Jan-19		24.0		
Feb-19		20.9		
Mar-19		24.8		
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	25.8	322.8
Aug-18	322.8	26.2	24.2	324.8
Sep-18	324.8	26.6	26.4	325.0
Oct-18	325.0	27.1	22.9	325.6
Nov-18	325.6	24.1	19.1	330.6
Dec-18	330.6	22.9	22.0	331.5
Jan-19	331.5	24.0	23.9	331.6
Feb-19	331.6	20.9	19.7	332.7
Mar-19	332.7	24.8	23.1	334.5
Apr-19	334.5	20.3	22.8	332.0
May-19	332.0	21.5	23.1	330.4
Jun-19	330.4	21.9	22.7	329.6
Jul-19	329.6	24.7	24.3	330.1
Aug-19	330.1	24.7	22.6	332.1
Sep-19	332.1	24.1	23.0	333.3
Oct-19	333.3			
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 November 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	322.8			
Sep-17	318.8	319.4	323.9	324.9	326.3	328.1	327.8	326.4	324.8	324.8		
Oct-17	320.3	320.9	325.5	326.4	329.2	331.0	330.7	329.3	327.8	325.0	325.0	
Nov-17	323.0	323.6	327.4	328.3	331.1	334.2	333.9	333.5	331.9	329.1	325.6	
Dec-17	326.3	327.7	331.5	332.5	335.3	338.5	338.9	338.4	336.8	334.1	330.6	
Jan-18		327.7	331.5	332.4	335.2	338.4	338.9	339.2	337.6	335.0	331.5	
Feb-18			330.5	330.6	333.4	336.6	337.0	337.3	336.7	335.0	331.6	
Mar-18				330.5	333.3	336.4	336.9	337.2	337.5	336.1	332.7	
Apr-18					333.9	336.2	336.6	337.8	338.2	336.8	334.5	
May-18						332.8	333.2	334.4	334.8	333.4	332.0	
Jun-18							331.6	332.8	333.1	331.7	330.4	
Jul-18								332.0	332.3	331.0	329.6	
Aug-18									332.8	331.4	330.1	
Sep-18										333.5	332.1	
Oct-18											333.3	
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)

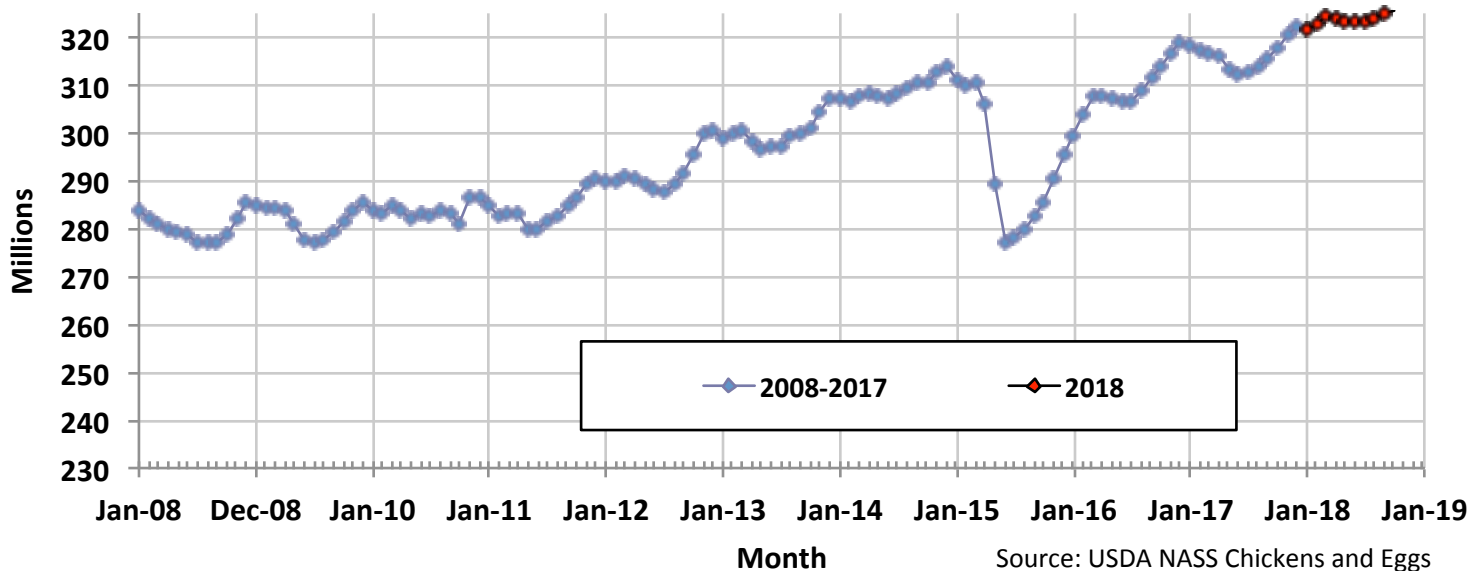


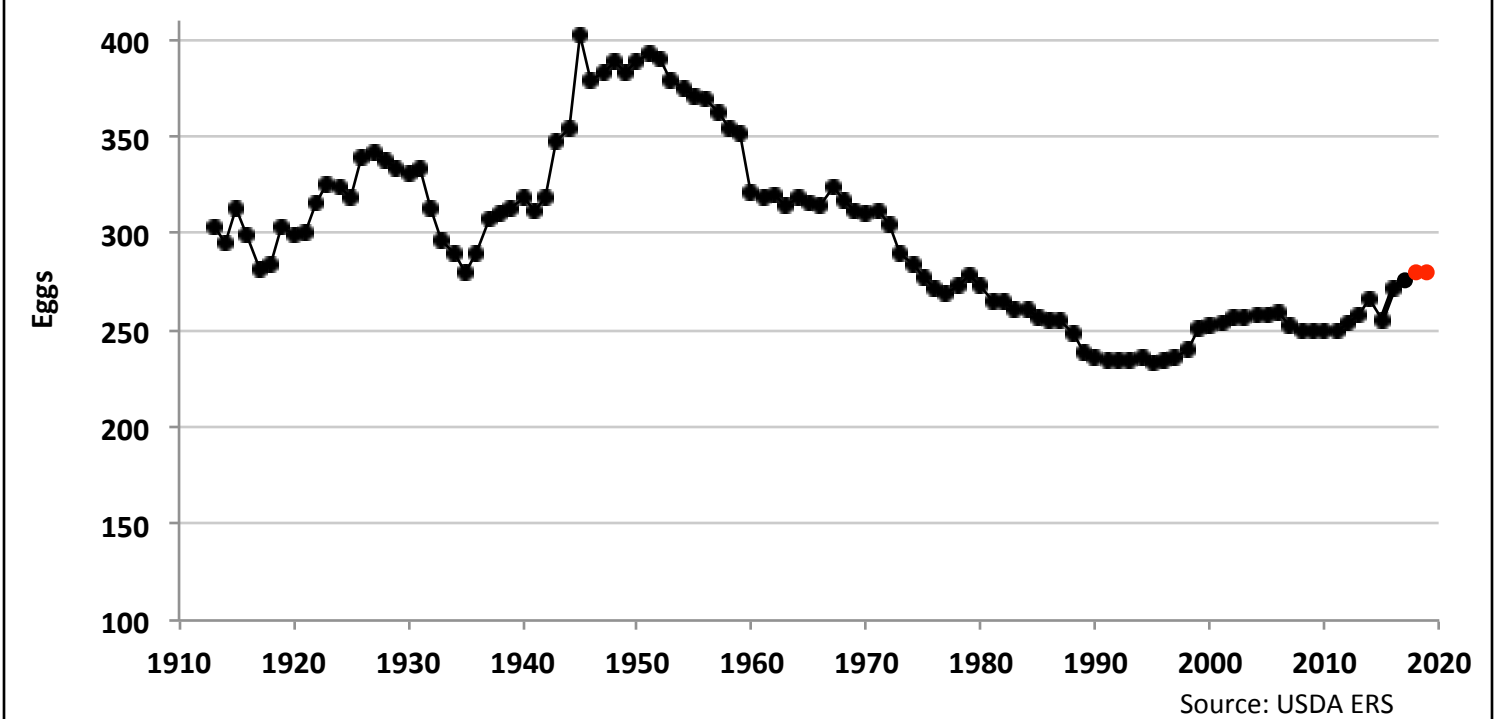
Figure 10: U.S. Table Eggs per Hundred Hens per Day by Month (2008-2018)



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 Oct	48,316	54,173	12.1
TABLE-EGG LAYERS (MILLIONS) (U.S.) (Avg.)	Jan to Oct	315.3	323.7	2.7
TABLE EGGS (MILLIONS/MONTH) (U.S.) (Avg.)	Jan to Oct	7,648	7,781	1.7
RATE OF LAY (%) (Avg.)	Jan to Oct	79.8	79.1	-0.7
U.S. TABLE EGG AVG. CASES/WEEK (THOUSANDS)	Jan to Oct	1,761	1,792	1.7
AVG MONTHLY CASES OF EGGS BROKEN (MILLION) (U.S.)	Jan to Oct	6.430	6.652	3.5
		2016	2017	Difference
PERCENT OF U.S. FLOCK IN or POST MOLT (Avg.)	Jan to Nov	17.9	17.5	-0.4
AVVERAGE PULLETS ADDED/MONTH (MILLIONS) (U.S.)	Jan to Mar 19'	20.5	23.2	2.8

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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