

# U.S. Flock Trends and Projections

May 6, 2020



*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 March hatch (straight-run chicks) was 0.5% higher than March 2019. This projects forward to a 25.2 million pullet placement for August of 2020 which is 0.1 million higher than August of 2019 placement (25.1).
- \* Current (March average, 2019) U.S. table egg layer number (330.6 million) is 3.5 percent smaller than last year's number at this time (342.7 million), and 1.8 million smaller than the previous month (332.4 million).
- \* In March, Iowa led the nation with 53.8 million laying hens compared to 34.7 million in Ohio, 33.6 million in Indiana, and 28.4 million in Pennsylvania.
- \* The April 1st U.S. rate of lay was 81.2% which is 1.1% higher than the April 1st 2019 level. The total number of table eggs produced in March 2020 was 2.1% lower than the March 2019 production.
- \* The March 2020 number of eggs exported was 5% higher than last year (March 2019) and 13% lower than last month (February 2020). The March exports represented 3.1% of the number of eggs produced.
- \* Shell eggs broken for products in March 2020 totaled 6.357 million cases, 7.2% less than in March 2019 (6.847 million cases).

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

	2019	2020	% Change
<b>Hatch - Egg-Type Straight Run (thousands) (U.S.)</b>	55,658	55,927	0.5
<b>Table Egg Layers (millions) (U.S.)</b>	342.7	330.6	-3.5
<b>Rate of lay percent (April 1, 2020)</b>	80.1	81.2	1.1
<b>Molting (April 1, 2020) (percent in + out of a molt)</b>	13.7	12.2	-10.9

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

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Million	286.8	290.1	298.6	308.2	312.9	297.7	322.0	329.6	341.6	341.6	337*

\* preliminary value

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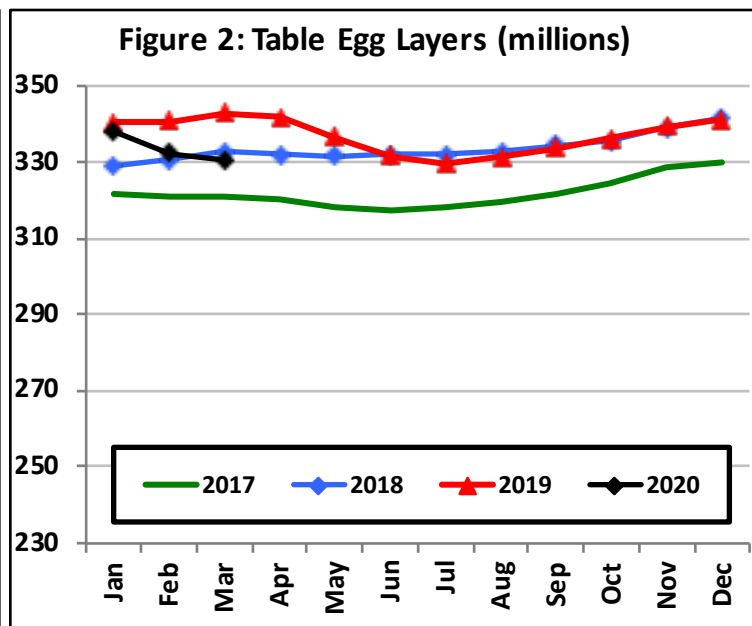
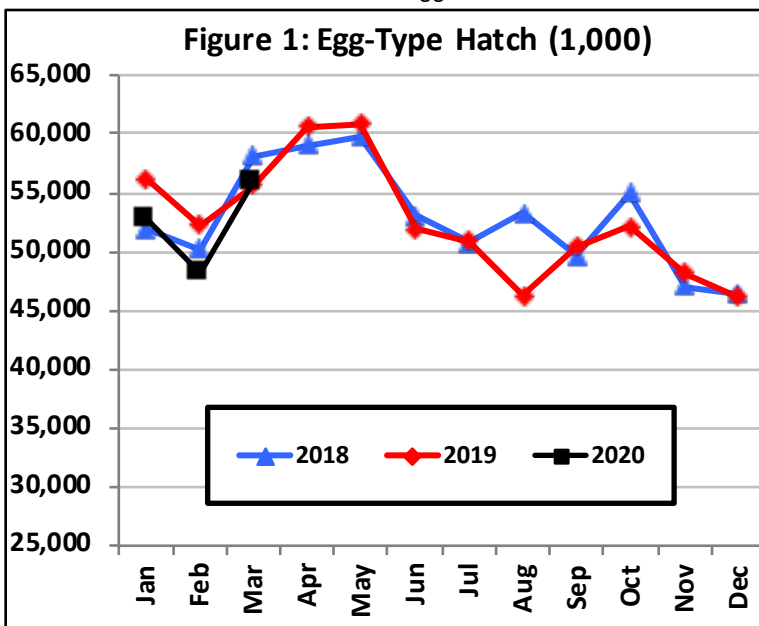
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EGG TYPE: EGGS IN INCUBATORS (on the 1st of the month) and STRAIGHT RUN HATCH (U.S.)

TABLE 1

EGG-TYPE Eggs in Incubators (thousands)				EGG-TYPE Straight Run Hatch (thousands)				
month	2019	2020	Change (%)	month	2018	2019	2020	Change %
Jan	51,432	47,756	-7.1	Jan	51,900	56,219	52,825	-6.0
Feb	55,001	50,243	-8.7	Feb	50,148	52,182	48,169	-7.7
Mar	53,586	49,225	-8.1	Mar	58,147	55,658	55,927	0.5
Apr	58,422	57,553	-1.5	Apr	58,986	60,668		
May	55,489			May	59,756	60,816		
Jun	51,648			Jun	53,019	51,858		
Jul	47,615			Jul	50,806	50,919		
Aug	47,490			Aug	53,207	46,246		
Sep	47,878			Sep	49,610	50,386		
Oct	48,512			Oct	54,960	52,066		
Nov	48,069			Nov	47,043	48,113		
Dec	47,798			Dec	46,370	46,114		
<b>4 Month Avg.</b>	54,610	51,194	-6.3	<b>3 Month Avg.</b>	53,398	54,686	52,307	-4.4
<b>4 Month Total</b>	218,441	204,777		<b>3 Month Total</b>	160,195	164,059	156,921	
<b>12 Month Total</b>	560,591			<b>12 Month Total</b>	633,952	631,245		

Source: USDA NASS Chickens and Eggs



AVERAGE U.S. TABLE EGG LAYERS (MILLIONS)

TABLE 2

month	TOTAL Table Egg Layers						% Change with respect to	
	2015	2016	2017	2018	2019	2020	last year	2015-2019
Jan	313.4	302.5	321.7	329.0	340.5	338.1	-0.7	5.2
Feb	312.6	307.2	320.8	330.7	340.7	332.4	-2.4	3.1
Mar	313.1	310.6	320.6	332.7	342.7	330.6	-3.5	2.0
Apr	309.0	310.7	320.1	332.1	341.6			
May	292.7	310.3	318.2	331.6	336.7			
Jun	280.4	309.7	317.3	331.9	331.6			
Jul	281.6	309.6	317.9	331.8	329.6			
Aug	283.3	311.7	319.8	332.8	331.1			
Sep	286.1	314.6	322.0	334.4	333.6			
Oct	289.4	316.4	324.8	335.6	336.1			
Nov	294.0	319.3	328.5	339.0	339.2			
Dec	299.1	321.7	330.0	341.6	341.2			
<b>3 Month Avg.</b>	313.0	306.7	321.0	330.8	341.3	333.7	-2.2	3.4
<b>Annual Avg.</b>	296.2	312.0	321.8	333.6	337.0			

Source: USDA NASS Chickens and Eggs



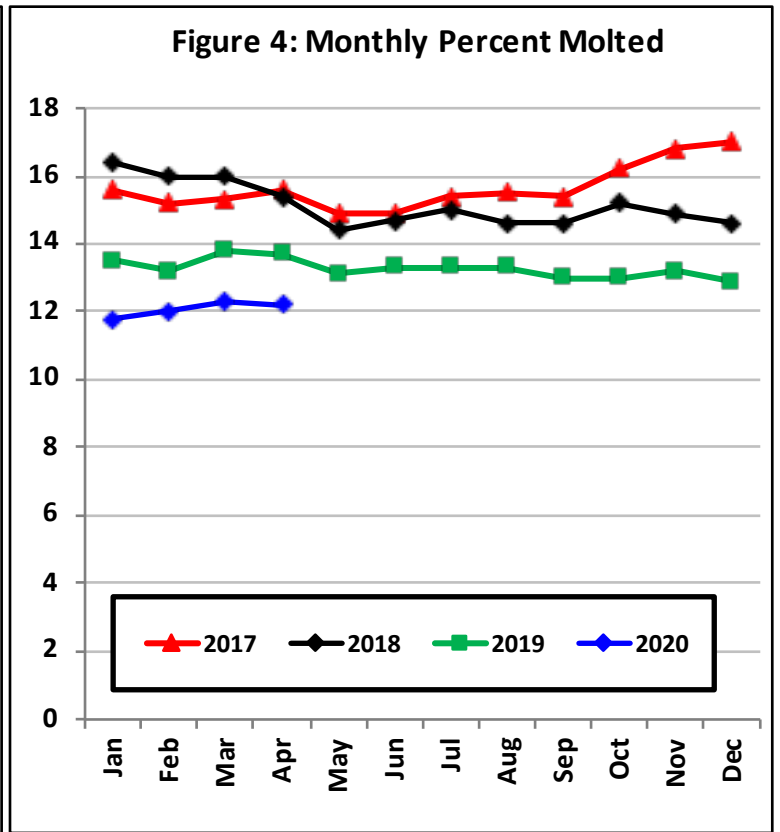
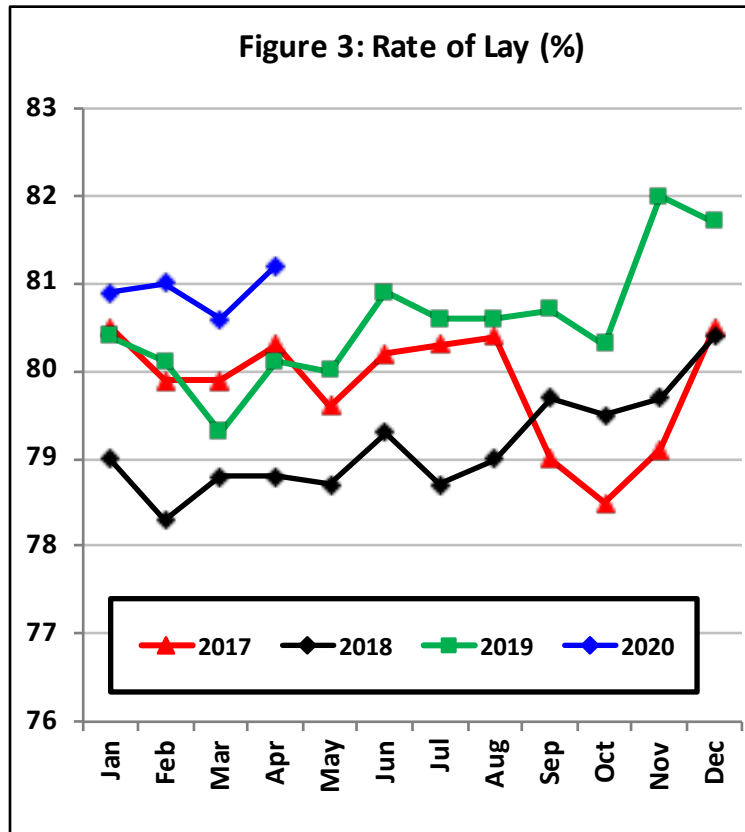
U.S. TABLE EGGS, AND RATE OF LAY on the 1st of EACH MONTH (ALL STATES)

TABLE 3

month	Table Eggs - human consumption (millions)						Rate of Lay (Table)	
	2016	2017	2018	2019	2020	Change (%)	2019	2020
Jan	7,244	7,997	8,026	8,476	8,487	0.1	80.4	80.9
Feb	6,950	7,176	7,273	7,604	7,791	2.5	80.1	81.0
Mar	7,552	7,962	8,128	8,470	8,291	-2.1	79.3	80.6
Apr	7,288	7,679	7,846	8,210			80.1	81.2
May	7,557	7,884	8,128	8,401			80.0	
Jun	7,305	7,641	7,873	8,038			80.9	
Jul	7,592	7,923	8,115	8,241			80.6	
Aug	7,672	7,904	8,190	8,287			80.6	
Sep	7,472	7,610	7,986	8,062			80.7	
Oct	7,792	7,936	8,287	8,458			80.3	
Nov	7,665	7,864	8,143	8,329			82.0	
Dec	8,024	8,160	8,515	8,601			81.7	
<b>YTD Avg.</b>	7,248	7,712	7,809	8,183	8,189	0.1	80.0	80.9
<b>Annual Avg.</b>	7,509	7,811	8,042	8,265			80.6	
<b>Total</b>	90,110	93,735	96,509	99,175				

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			
	2017	2018	2019	2020	2017	2018	2019	2020
Jan	1.7	1.8	1.5	1.7	15.6	16.4	13.5	11.8
Feb	2.2	2.9	2.6	2.2	15.2	16.0	13.2	12.0
Mar	2.4	1.8	1.5	1.7	15.3	16.0	13.8	12.3
Apr	1.7	1.7	1.3	1.3	15.6	15.4	13.7	12.2
May	2.7	3.1	2.5		14.9	14.4	13.1	
Jun	2.4	3.0	2.1		14.9	14.7	13.3	
Jul	2.4	2.2	2.0		15.4	15.0	13.3	
Aug	2.5	2.2	2.0		15.5	14.6	13.3	
Sep	3.5	2.7	2.0		15.4	14.6	13.0	
Oct	3.0	2.3	1.9		16.2	15.2	13.0	
Nov	2.0	1.6	1.5		16.8	14.9	13.2	
Dec	1.3	1.1	0.9		17.0	14.6	12.9	
<b>4 Month Avg.</b>	2.0	2.1	1.7	1.7	15.4	16.0	13.6	12.1
<b>12 Month Avg.</b>	2.3	2.2	1.8		15.7	15.2	13.3	

Source: USDA NASS Chickens and Eggs

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

**TABLE 5**

month	2015	2016	2017	2018	2019	2020	% Change with respect to last year 2015-2019	
Jan	6.634	5.639	6.540	6.482	7.018	7.464	6.4	15.5
Feb	5.746	5.484	6.192	5.904	6.360	6.715	5.6	13.1
Mar	6.030	6.308	6.601	6.218	6.847	6.357	-7.2	-0.7
Apr	6.061	6.255	6.126	6.403	6.870			
May	5.533	6.576	6.547	6.922	7.335			
Jun	6.408	6.679	6.604	6.891	6.801			
Jul	5.641	6.474	6.376	6.770	6.865			
Aug	5.589	6.804	6.603	7.110	7.062			
Sep	5.583	6.539	6.126	6.793	6.834			
Oct	5.814	6.636	6.583	7.045	7.408			
Nov	5.350	6.499	6.296	6.593	6.438			
Dec	5.749	6.498	6.306	6.854	7.087			
<b>3 Month Avg.</b>	6.137	5.810	6.444	6.201	6.742	6.845	1.5	9.2
<b>3 Month Total</b>	18.410	17.431	19.333	18.604	20.225	20.535		
<b>12 Month Total</b>	70.138	76.391	76.901	79.983	82.925			

Source: USDA NASS Egg products - monthly

Million Cases Produced  
% BROKEN

250.306	260.376	268.079	275.487	68.244
30.5	29.5	29.8	30.1	30.1

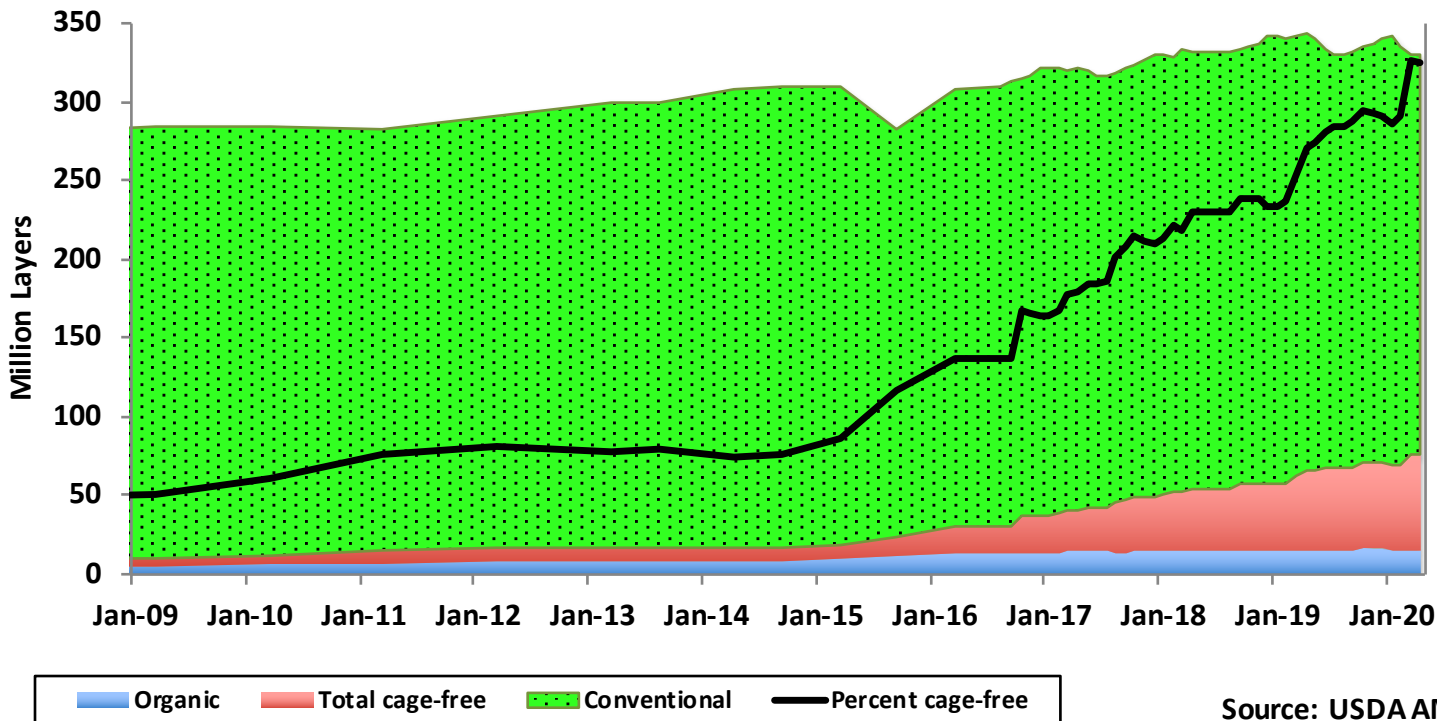
CAGE-FREE LAYERS (MILLIONS)

TABLE 6

	Non-Organic Cage-Free		Certified Organic		TOTAL Cage-Free Layers			Cage-Free % of U.S. Flock
	2019	2020	2019	2020	2019	2020	Change (%)	
January	41.5	54.0	15.7	15.7	57.2	69.6	22%	20.4%
February	41.6	54.0	15.7	15.7	57.3	69.6	21%	20.8%
March	46.8	61.2	15.0	15.7	61.9	76.9	24%	23.3%
April	50.7	60.9	15.7	15.7	66.4	76.6	15%	23.2%
May	50.9		15.8		66.7			
June	51.3		15.8		67.1			
July	51.3		15.8		67.1			
August	51.3		15.8		67.1			
September	52.7		15.8		68.5			
October	54.2		16.1		70.3			
November	54.6		16.2		70.8			
December	54.6		16.2		70.8			
4 Month Avg.	45.2	57.5	15.5	15.7	60.7	73.2	21%	21.9%
12 Month Avg.	50.1		15.8		65.9			

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

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



Source: USDA AMS

EXPORT OF TABLE EGGS IN THE SHELL IN 2020 (Thousand cases- 30 doz)

TABLE 7

Month \ To	North	Central	Caribbean	EU27 + UK	East Asia	Southeast	Middle	Total 2020	Total 2019	% of U.S. Production
	America	America				Asia	East			
Jan	120.9	0.0	20.7	0.2	130.8	0.0	22.9	301.0	244.8	1.28
Feb	144.4	0.7	16.5	1.6	121.9	0.0	21.6	308.9	173.9	1.43
Mar	146.5	1.8	23.3	0.4	133.0	0.0	9.0	317.8	386.5	1.38
Apr									404.5	
May									411.3	
Jun									359.0	
Jul									338.0	
Aug									425.5	
Sep									406.1	
Oct									596.5	
Nov									330.9	
Dec									356.2	
<b>3 Mo. Total</b>	<b>411.8</b>	<b>2.4</b>	<b>60.5</b>	<b>2.2</b>	<b>385.7</b>	<b>0.0</b>	<b>53.5</b>	<b>927.7</b>	<b>805.2</b>	<b>1.36</b>
<b>%</b>	<b>44.4</b>	<b>0.3</b>	<b>6.5</b>	<b>0.2</b>	<b>41.6</b>	<b>0.0</b>	<b>5.8</b>			

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

EXPORT OF EGG PRODUCTS IN 2020 (EQUIVALENT: thousand cases- 30 doz)

TABLE 8

Month \ To	North	Central	Caribbean	EU27 + UK	East Asia	Southeast	Middle	Total 2020	Total 2019	% of U.S. Production
	America	America				Asia	East			
Jan	176.4	8.1	16.0	10.8	127.0	36.1	5.8	436.8	297.5	1.85
Feb	263.3	12.8	14.3	7.5	113.4	5.3	4.3	503.2	270.9	2.33
Mar	186.6	1.4	12.8	4.0	100.1	13.7	30.8	386.8	283.0	1.68
Apr									333.3	
May									326.5	
Jun									373.5	
Jul									347.5	
Aug									345.1	
Sep									315.5	
Oct									360.8	
Nov									464.9	
Dec									415.5	
<b>3 Mo. Total</b>	<b>626.3</b>	<b>22.3</b>	<b>43.2</b>	<b>22.3</b>	<b>340.6</b>	<b>55.2</b>	<b>40.9</b>	<b>1,326.8</b>	<b>851.4</b>	<b>1.95</b>
<b>%</b>	<b>47.2</b>	<b>1.7</b>	<b>3.3</b>	<b>1.7</b>	<b>25.7</b>	<b>4.2</b>	<b>3.1</b>			

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 - 2020

TABLE 9

	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	23,574		301.0	1.28	436.8	1.85	737.8	3.13
Feb	21,641		308.9	1.43	503.2	2.33	812.1	3.75
Mar	23,029		317.8	1.38	386.8	1.68	704.6	3.06
Apr								
May								
Jun								
Jul								
Aug								
Sep								
Oct								
Nov								
Dec								
<b>Total/Av</b>	<b>68,244</b>		<b>927.7</b>	<b>1.36</b>	<b>1,326.8</b>	<b>1.94</b>	<b>2,254.5</b>	<b>3.30</b>





Egg Inventory at the Beginning of the Month

TABLE 10

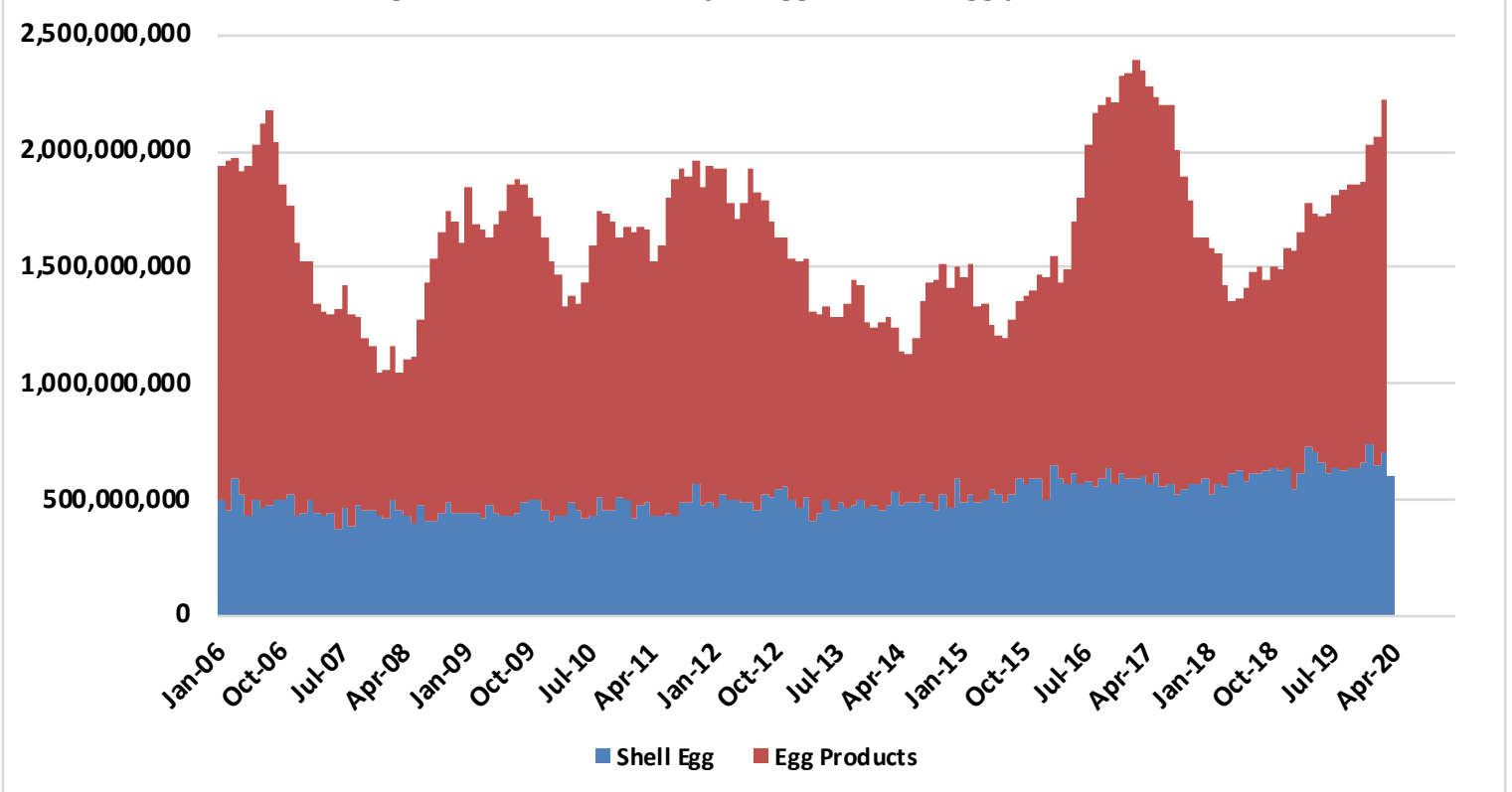
month	Shell Eggs (eggs)			2020-2019	Egg Products (eggs equivalent)			2020-2019
	2018	2019	2020	% Change	2018	2019	2020	% Change
JAN	588,888,000	637,344,000	738,540,000	16%	1,047,558,765	942,881,484	1,294,769,802	37%
FEB	527,652,000	547,956,000	643,968,000	18%	1,057,913,844	1,029,023,582	1,421,300,357	38%
MAR	574,560,000	615,672,000	706,392,000	15%	984,399,906	1,037,123,073	1,521,765,559	47%
APR	557,604,000	725,364,000	600,228,000	-17%	864,324,599	1,049,273,001	*	
MAY	613,836,000	705,240,000			745,236,648	1,031,717,861		
JUN	625,140,000	666,000,000			744,536,232	1,059,795,872		
JUL	576,972,000	616,608,000			835,816,631	1,122,375,546		
AUG	613,548,000	641,772,000			871,527,787	1,169,432,459		
SEP	619,488,000	620,856,000			882,200,742	1,210,612,240		
OCT	630,000,000	638,964,000			819,763,724	1,223,244,103		
NOV	643,176,000	636,444,000			858,254,954	1,225,657,161		
DEC	626,544,000	660,276,000			870,841,984	1,208,744,400		
<b>3 Month Avg.</b>	563,700,000	600,324,000	696,300,000	16%	1,029,957,505	1,003,009,380	1,412,611,906	41%
<b>12 Month Avg.</b>	599,784,000	642,708,000			881,864,651	1,109,156,732		

Assumes: 12.5% drying yield for drying egg whites, 46.3% drying yield for drying egg yolks, 25% drying yield for drying whole egg, and 48.84 grams of edible egg per egg broken for further processing

\* Note: the dried egg inventory for the last day of March is not available yet.

Data Source: USDA

Figure 6: Total inventory of eggs (shell + egg products)



CONSUMPTION of EGGS per PERSON

TABLE 11

month	Shell Eggs (eggs/person)			20 - 19	Egg Products (eggs/person)			20 - 19
	2018	2019	2020	Change	2018	2019	2020	Change
JAN	17.0	17.8	17.7	-0.1	6.6	7.2	7.3	0.2
FEB	15.3	16.0	16.2	0.2	6.3	6.7	6.6	-0.2
MAR	17.6	17.9	18.0	0.1	6.8	7.2	*	
APR	16.4	17.0			6.9	7.3		
MAY	16.7	17.1			7.2	7.6		
JUN	16.1	16.7			7.0	6.9		
JUL	16.9	17.2			7.0	7.0		
AUG	16.6	17.0			7.5	7.3		
SEP	16.4	16.6			7.3	7.1		
OCT	16.7	17.0			7.4	7.8		
NOV	16.8	17.9			6.9	6.6		
DEC	17.6	17.9			7.0	7.1		
<b>2 Month Sum</b>	<b>32.3</b>	<b>33.8</b>	<b>34.0</b>	<b>0.1</b>	<b>12.9</b>	<b>13.9</b>	<b>13.9</b>	<b>0.0</b>
<b>12 Month Sum</b>	<b>200.2</b>	<b>206.2</b>			<b>83.9</b>	<b>85.8</b>		

USDA ERS is projecting a 1.1 eggs/person increase in total consumption for 2020 with respect to 2019

\* Note: the dried egg inventory for the last day of March is not available yet.

Figure 7: Consumption of shell eggs and egg products 12-month running sum (eggs/person)

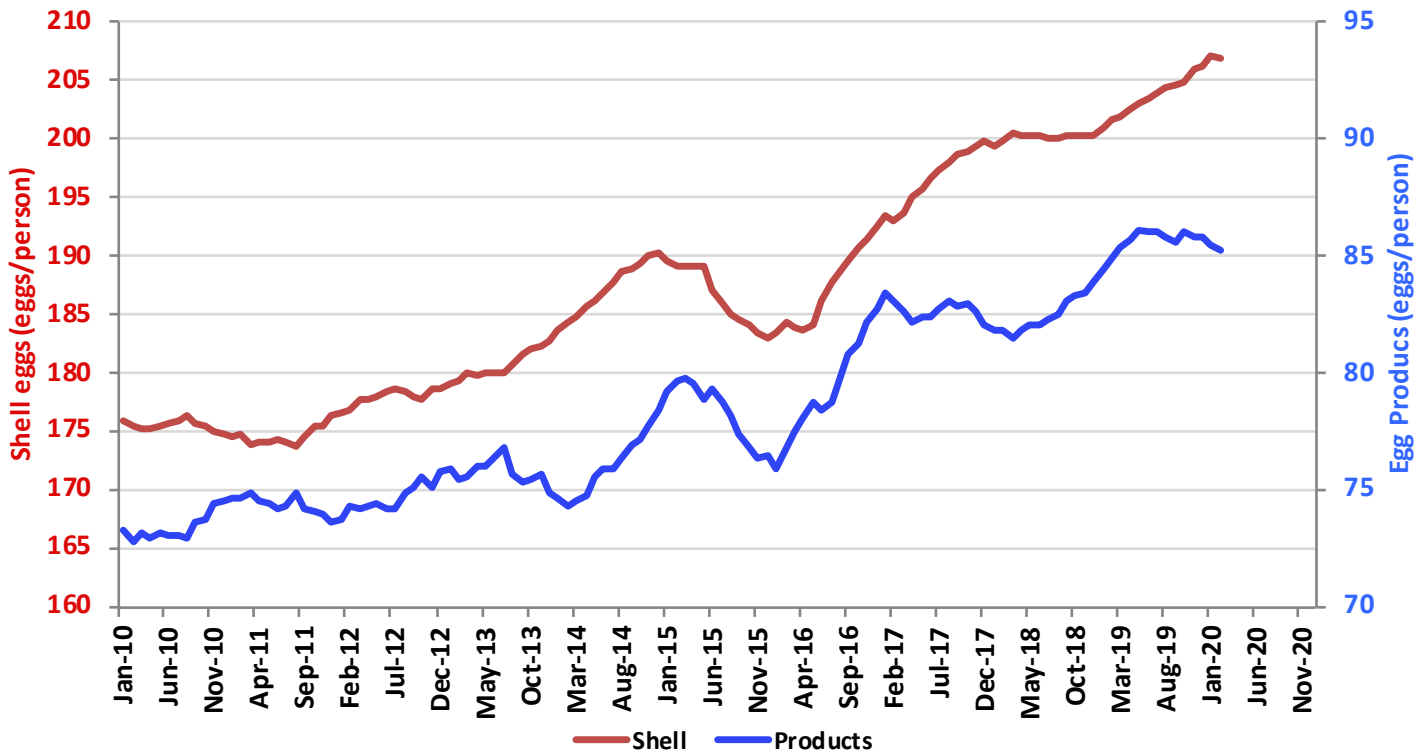


TABLE EGG LAYERS IN LEADING STATES - (LAYERS IN 30,000+ HEN FLOCKS) - 2020

TABLE 12

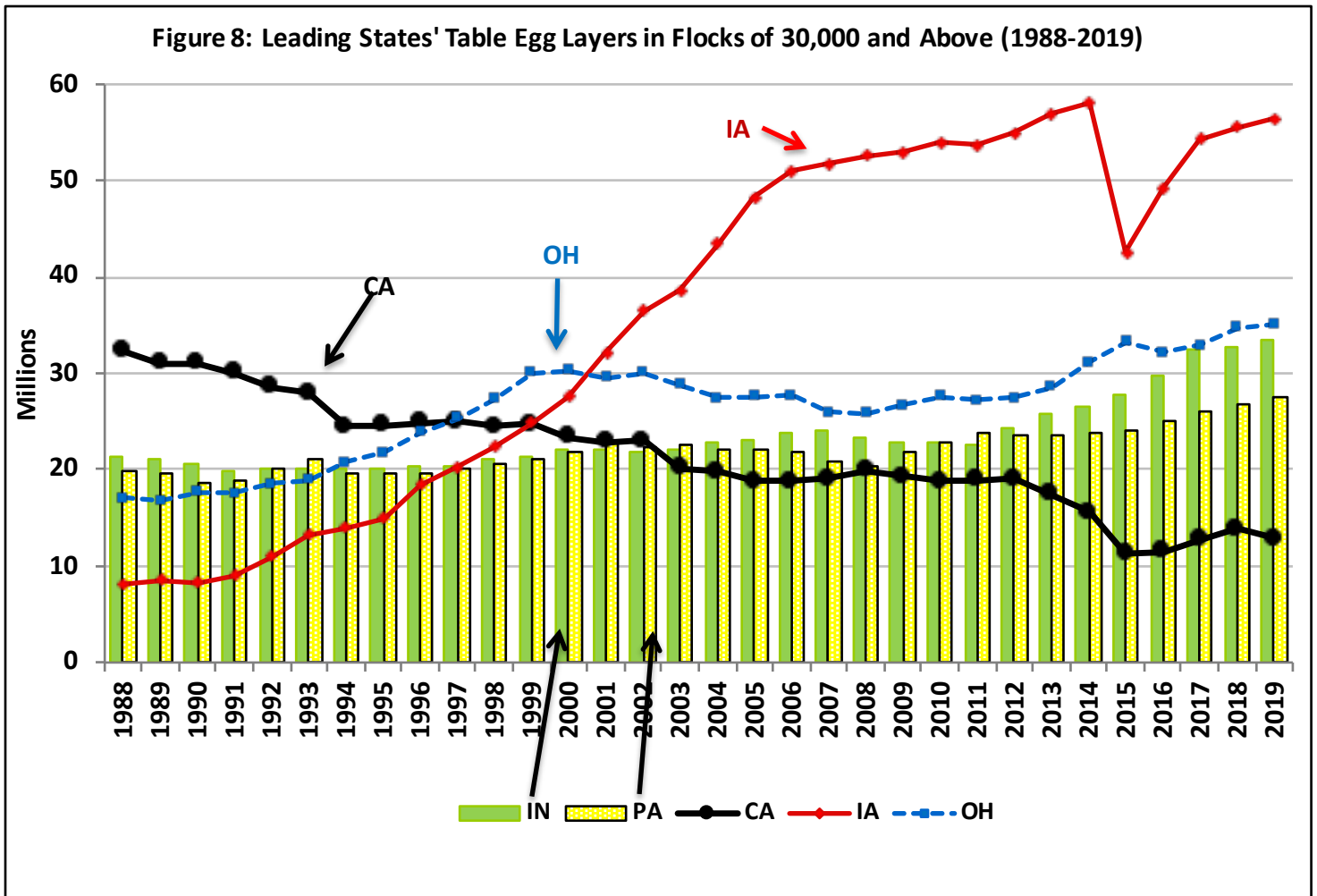
month	IA	OH	IN	PA	CA	U.S.
Mar-2019	57.50	36.18	34.03	27.13	12.93	327.25
	(Millions)					
Jan-2020	56.40	34.81	34.22	28.83	13.41	322.38
Feb-2020	55.04	34.63	33.67	28.45	13.30	316.75
Mar-2020	53.77	34.68	33.63	28.36	13.12	314.89
Apr-2020						
May-2020						
Jun-2020						
Jul-2020						
Aug-2020						
Sep-2020						
Oct-2020						
Nov-2020						
Dec-2020						
<b>3 Month Avg.</b>	<b>55.07</b>	<b>34.71</b>	<b>33.84</b>	<b>28.54</b>	<b>13.28</b>	<b>318.00</b>

Source: USDA NASS Chickens and Eggs

In March 2019 USDA stopped reporting the number of table egg layers for Texas which was the 5th largest egg producing State then.

% of all U.S. table egg layers in flocks with 30,000 or more hens =	95.3%
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Figure 8: Leading States' Table Egg Layers in Flocks of 30,000 and Above (1988-2019)



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

**TABLE 13**

month	2014	2015	2016	2017	2018	2019	2020
Jan	2.540	2.682	3.081	2.581	2.837	2.226	2.540
Feb	2.536	2.689	3.074	2.598	2.762	2.186	2.627
Mar	2.472	2.605	2.997	2.742	2.646	2.246	2.564
Apr	2.530	2.718	2.840	2.705	2.638	2.226	2.688
May	2.497	2.917	2.805	2.699	2.570	2.246	2.623
Jun	2.439	2.892	2.866	2.747	2.507	2.283	2.583
Jul	2.608	2.797	2.836	2.696	2.601	2.289	2.614
Aug	2.535	2.797	2.725	2.773	2.618	2.304	2.611
Sep	2.553	2.857	2.615	2.773	2.581	2.352	2.867
Oct	2.610	2.958	2.446	2.820	2.565	2.347	2.988
Nov	2.619	2.937	2.566	2.726	2.526	2.429	
Dec	2.664	2.947	2.650	2.786	2.337	2.456	
<b>10 month avg.</b>	2.532	2.791	2.828	2.713	2.633	2.270	2.670
<b>12 month avg.</b>	2.550	2.816	2.792	2.721	2.599	2.299	

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 14**

month	2015	2016	2017	2018	2019	2020	2015 to '19 month avg.
Jan	17.9	21.3	19.5	20.7	24.0	20.9	20.7
Feb	18.4	21.5	18.9	18.0	20.9	22.0	19.5
Mar	20.2	22.7	19.6	23.2	24.8	23.5	22.1
Apr	16.5	20.7	18.8	21.8	21.2	21.7	19.8
May	18.2	21.1	20.6	21.1	20.9	20.8	20.4
Jun	18.0	20.9	19.8	22.7	24.6	23.1	21.2
Jul	20.7	27.1	24.0	25.1	26.1	23.2	24.6
Aug	21.4	25.7	25.2	26.2	25.1	25.2	24.8
Sep	21.4	23.1	23.8	26.6	27.4		24.5
Oct	21.8	25.9	24.1	27.0	27.4		25.2
Nov	21.3	26.0	22.4	23.9	23.4		23.4
Dec	19.3	18.8	18.9	22.9	23.0		20.6
<b>8 month avg.</b>	18.9	22.6	20.8	22.3	23.4	22.6	21.6
<b>Annual Avg.</b>	19.6	22.9	21.3	23.3	24.1		22.2
<b>Total</b>	235.1	274.7	255.8	279.2	288.8		266.7

Source: USDA NASS Chickens and Eggs

% Change to date **-3.83**

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)

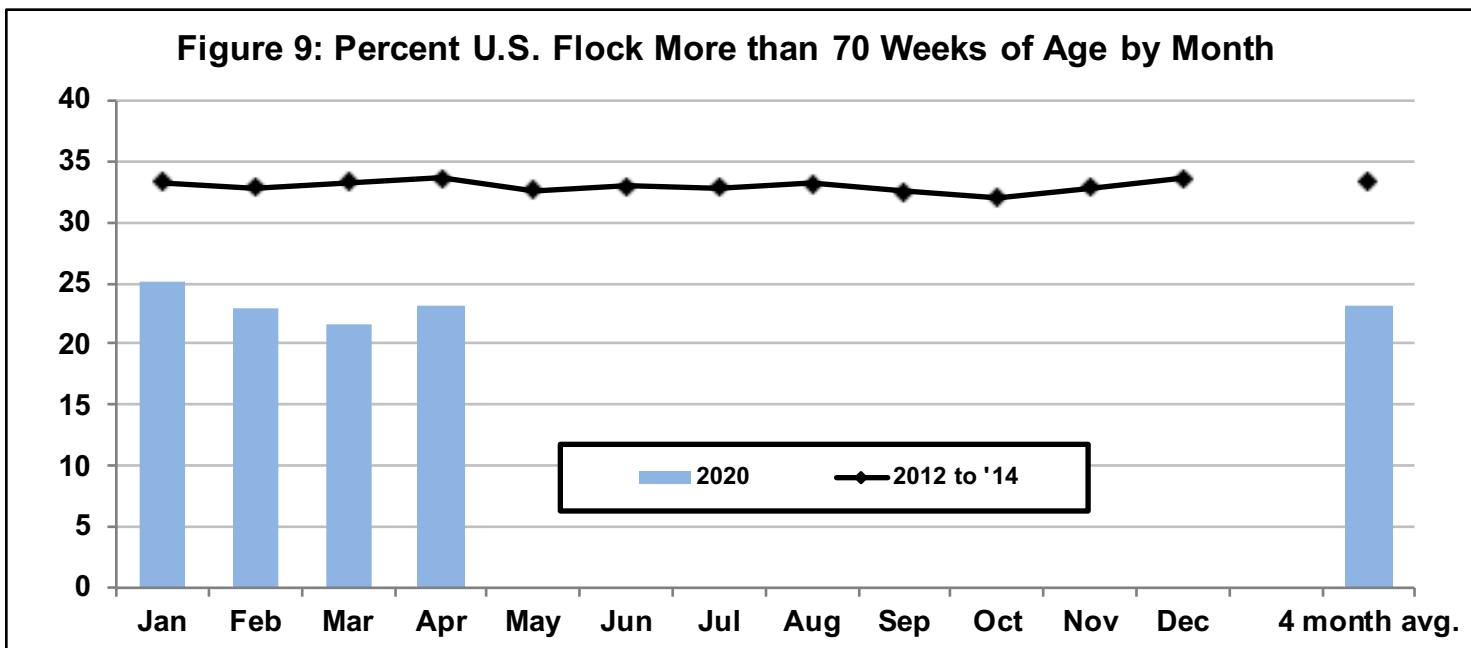
TABLE 15

	% of National Flock over 70 weeks of age (on the 1st of the month)						2012 to '14
	2015	2016	2017	2018	2019	2020	
Jan	32.7		24.8	29.8	24.8	25.1	33.3
Feb	31.6		25.0	28.2	23.5	22.9	32.9
Mar	32.6		25.4	28.8	24.0	21.7	33.3
Apr			25.9	28.6	25.1	23.1	33.6
May			26.7	27.9	23.4		32.7
Jun			27.5	28.6	22.8		33.0
Jul			26.9	28.0	22.3		32.9
Aug			27.8	27.2	22.2		33.2
Sep			28.9	26.4	21.9		32.5
Oct			28.2	25.1	22.2		32.0
Nov		22.0	29.2	24.8	23.2		32.9
Dec		23.9	29.9	24.6	24.3		33.6
<b>4 month avg.</b>			25.3	28.9	24.4	23.2	33.3
<b>12 month avg.</b>	32.3		27.2	27.3	23.3		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.

Figure 9: 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:  $0.08748 - 0.00486 * \text{Price } 12-18 \text{ Jan} - 0.00665 * \text{Price } 12-18 \text{ Feb} - 0.00275 * \text{Price } 12-18 \text{ Mar} - 0.00632 * \text{Price } 12-18 \text{ Apr} - 0.00416 * \text{Price } 12-18 \text{ May} - 0.00294 * \text{Price } 12-18 \text{ Jun} + 0.0033 * \text{Price } 12-18 \text{ Jul} + 0.00364 * \text{Price } 12-18 \text{ Aug} + 0.00426 * \text{Price } 12-18 \text{ Sep} + 0.00459 * \text{Price } 12-18 \text{ Oct} - 0.00064 * \text{Price } 12-18 \text{ Nov} - 0.00574 * \text{Price } 12-18 \text{ Dec} - 0.00094 * \text{MOLT} - \text{previous } 12\text{-mo}$

... 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 R<sup>2</sup>=0.72

- 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:  $= 0.01395 + 0.79519 * \text{Added} / \text{Beg. count} + 0.0039 * \text{Jan} - 0.0046 * \text{Feb} - 0.00214 * \text{Mar} + 0.00567 * \text{Apr} + 0.00251 * \text{May} - 0.00061 * \text{Jun} - 0.00096 * \text{Jul} - 0.00605 * \text{Aug} - 0.0022 * \text{Sep} - 0.00934 * \text{Oct} - 0.01192 * \text{Nov} + 0.01792 * \text{Shock Sep} + 0.00923 * \text{"Adj. Price } < 0.80 \text{ Qtr } 4"$

... 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 "ShockSep" is a dummy variable to capture the losses experienced after the year 2010 SE recall

... where "Adj. Price <0.80 Qtr 4" is a dummy variable that takes the value one if the CPI adjusted Urner Barry midwest large price in the last quarter of the year is lower than 0.8 and zero otherwise

Adjusted R<sup>2</sup>=0.60

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

**TABLE 16**

Actual	Actual	Actual	Actual	Proj.	Proj.	Proj.	Proj.	Proj.	Proj.	Proj.	Proj.
2020	2020	2020	2020	2020	2020	2020	2020	2020	2020	2020	2020
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
341.6	334.6	330.3	330.8	328.7	327.5	327.7	328.2	330.7	332.2	333.3	337.5

Project. Year end:

**Dec 31, 2020 - 337**

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

Note: the flock projection model is based on baseline conditions and it may end up less accurate than normal under the special market circumstances the industry is going through. No adjustment have been made in the projection model to account for the lack of demand for egg products the industry is currently facing.



Calculated on: May 2020

2020 Bird Flow by Month

Table 17

ACTUAL FLOCK (million birds)				
month	Beginning Count	Pullets added <sup>1</sup>	Slaughter, Died & Missing	Ending count
Jan-20	341.6	20.9	27.9	334.6
Feb-20	334.6	21.2	25.5	330.3
Mar-20	330.3	23.5	23.0	330.8
Apr-20	330.8	21.7		
May-20		20.8		
Jun-20		23.1		
Jul-20		24.1		
Aug-20		25.2		
Sep-20				
Oct-20				
Nov-20				
Dec-20				
Jan-21				
Feb-21				
Mar-21				
Apr-21				
May-21				
Jun-21				
Jul-21				
Aug-21				
Sep-21				
Oct-21				
Nov-21				
Dec-21				

<sup>1</sup> at 5 months of age

Table 18

PROJECTED FLOCK (million birds)				
month	Beginning Count	Pullets added <sup>1</sup>	Slaughter, Died & Missing	Ending count
Jan-20	341.6	20.9	27.9	334.6
Feb-20	334.6	21.2	25.5	330.3
Mar-20	330.3	23.5	23.0	330.8
Apr-20	330.8	21.7	23.9	328.7
May-20	328.7	20.8	22.0	327.5
Jun-20	327.5	23.1	22.8	327.7
Jul-20	327.7	24.1	23.5	328.2
Aug-20	328.2	25.2	22.7	330.7
Sep-20	330.7	25.4	23.9	332.2
Oct-20	332.2	25.6	24.6	333.3
Nov-20	333.3	24.3	20.1	337.5
Dec-20	337.5	22.9	23.1	337.2
Jan-21	337.2	23.1	24.5	335.8
Feb-21	335.8	22.3	21.0	337.1
Mar-21	337.1			
Apr-21				
May-21				
Jun-21				
Jul-21				
Aug-21				
Sep-21				
Oct-21				
Nov-21				
Dec-21				

<sup>1</sup> at 5 months of age

Actual number

## 2020 U.S. Flock Size: EIC Projections and USDA Reported Numbers

Table 19

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

For May 2020

**Number of U.S. table egg layers (million) on the 1<sup>st</sup> 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-20	340.7	341.6										
Feb-20	338.9	336.5	334.6									
Mar-20	340.0	337.6	330.0	330.3								
Apr-20	340.7	338.3	330.8	330.8								
May-20	338.3	336.0	328.6	328.7								
Jun-20	337.1	334.7	327.4	327.5								
Jul-20	337.3	334.9	327.7	327.7								
Aug-20	338.0	335.5	328.2	328.2								
Sep-20	340.5	338.1	330.7	330.7								
Oct-20	342.0	339.6	332.2	332.2								
Nov-20	343.1	340.6	333.2	333.3								
Dec-20	344.7	342.3	337.4	337.5								
Jan-21		342.0	337.1	337.2								
Feb-21			335.7	335.8								
Mar-21				337.1								
Apr-21												
May-21												
Jun-21												
Jul-21												
Aug-21												
Sep-21												
Oct-21												
Nov-21												
Dec-21												

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





Figure 10: U.S. Monthly Table-Egg Layers (2009-2020)

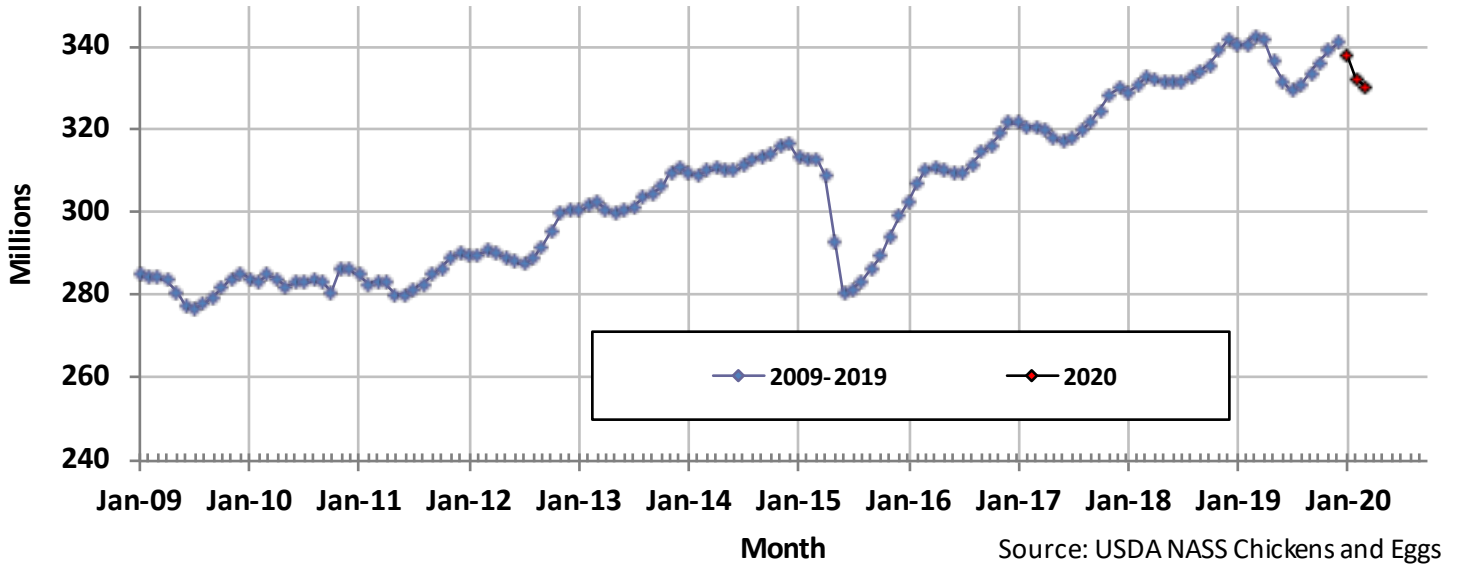


Figure 11: U.S. Table Eggs per Hundred Hens per Day by Month (2009-2020)

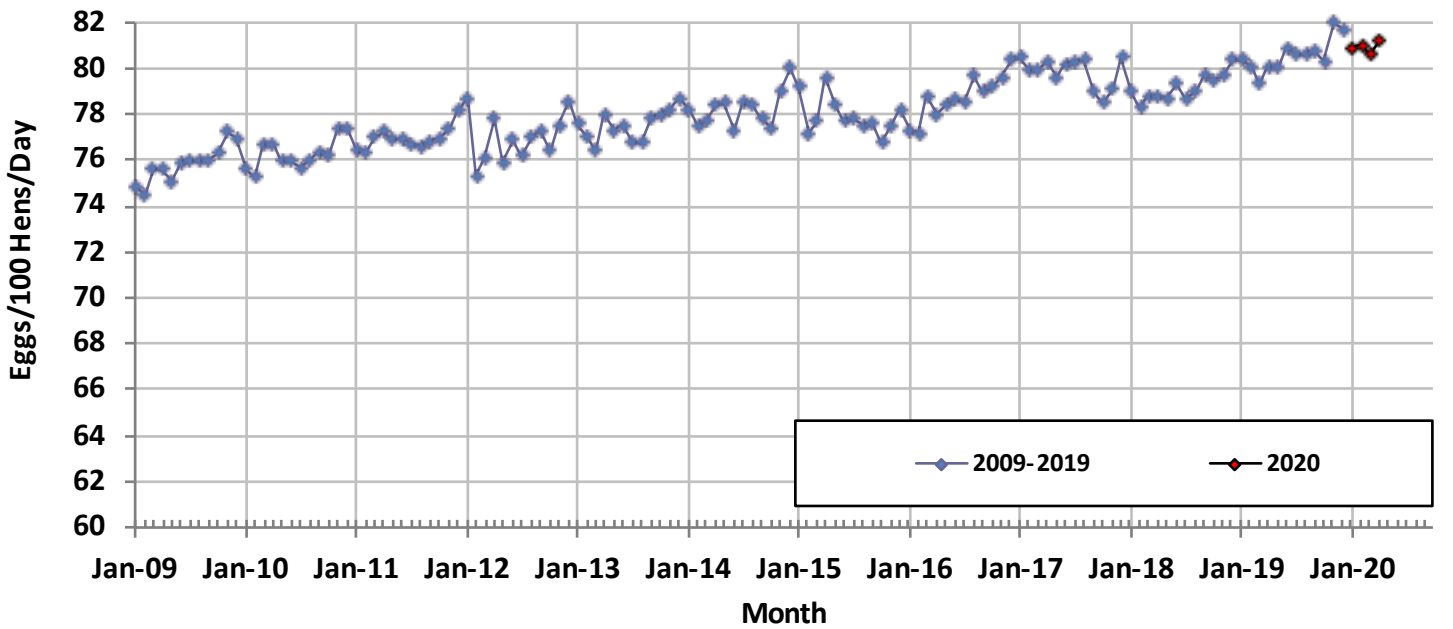


Figure 12: Monthly Percent of U.S. Flock Molted (2010-2020)

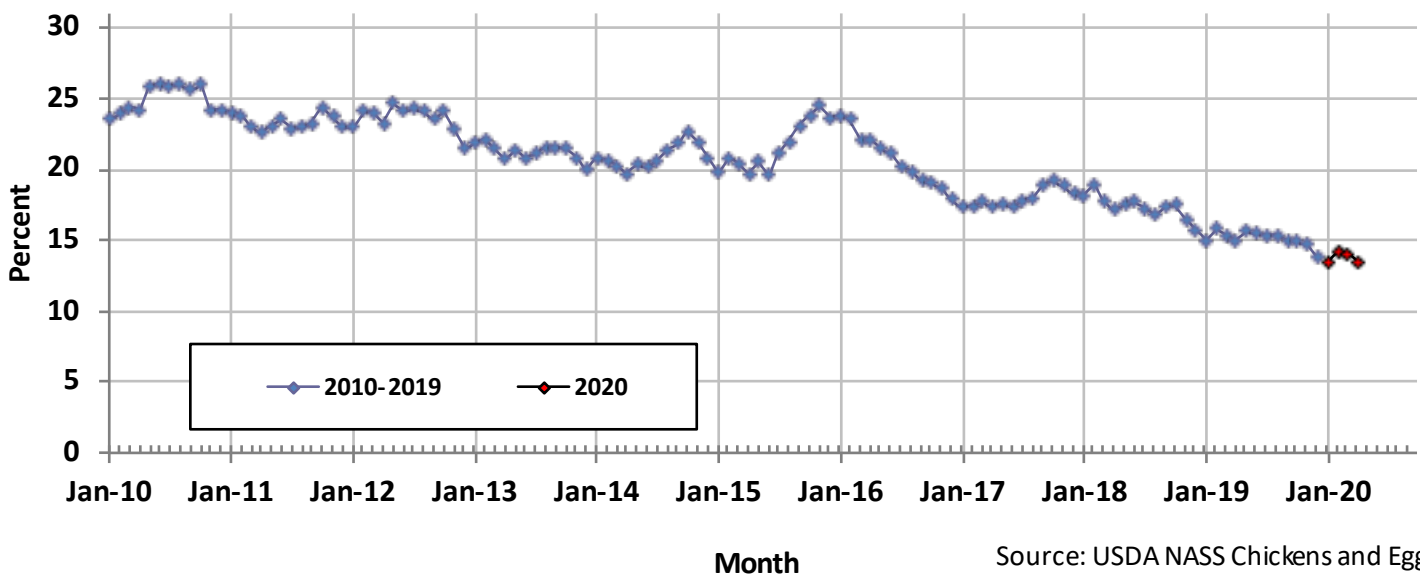
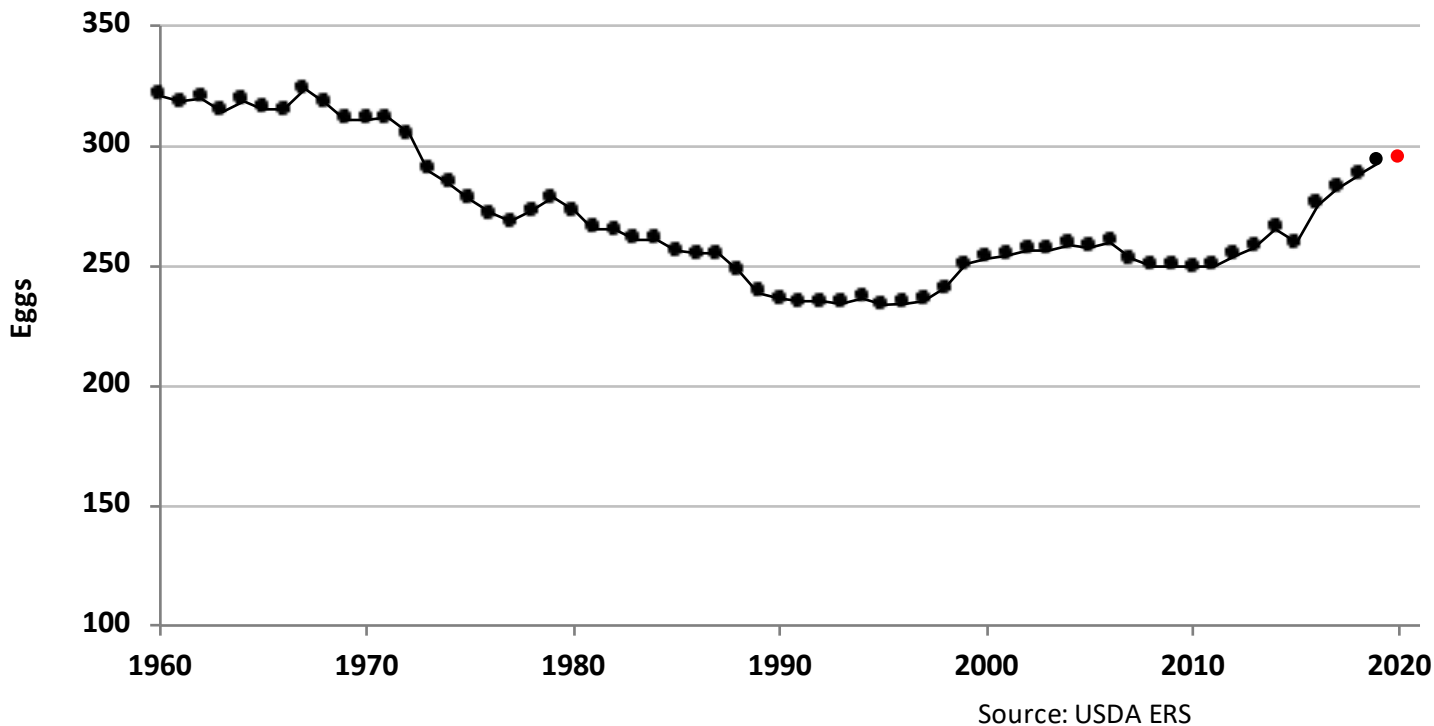


Figure 13: U.S. Per Capita Egg Consumption by Year (1960-2020)



**SUMMARY TO DATE**

**Table 20**

		2019	2020	% Change
Hatch of Egg-Type Straight Run (Thousands) (U.S.) (total)	Jan to Mar	54,686	52,307	-4.4
Table-Egg Layers (Millions) (U.S.) (avg.)	Jan to Mar	341.3	333.7	-2.2
Table Eggs (Millions/Month) (U.S.) (avg.)	Jan to Mar	8,183	8,189	0.1
Rate of Lay (%)	Jan to Mar	80.0	80.9	1.0
U.S. Table Egg Avg. Cases/Week (Thousands)	Jan to Mar	1,909	1,911	0.1
Avg Monthly Cases of Eggs Broken (Million) (U.S.)	Jan to Mar	6.742	6.845	1.5
		<b>2016</b>	<b>2017</b>	<b>Difference</b>
Percent of U.S. Flock In or Post Molt (avg.)	Jan to Apr	13.6	12.1	-1.5
Average Pullets Added/Month (millions) (U.S.)	Jan to Aug	23.4	22.6	-0.9

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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