United States
Department of
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Economics
and Statistics
Service

PES-310

May 1981

Poultry and Egg

OUTLOOK & SITUATION

Table 1--Poultry and Egg Situation at a Glance

ITEM	UNIT	1980 Jan.	1980 Feb.	1980 Mar.	1980 Apr.	1981 Jan.	1981 Feb.	1981 Mar.	1981 Apr.
		Eggs							
Farm production	Mil. doz.	503.8	466.1	496.2	476.2	500.7	449.7	498.4	476.8
Average number of layers on farms	Mil.	294.8	291.1	286.5	282.4	292.8	290.6	287.3	283.6
Rate of lay per layer	No.	20.5	19.2	20.8	20.2	20.5	18.6	20.8	20.2
Price received by farmers	Ct. per doz.	57.0	51.4	55.3	52.2	64.8	62.6	60.8	64.4
13 Metro areas price									
Grade A large	Ct. per doz.	65.2	60.6	66.6	62.0	74.9	72.4	70.7	75.1
Price paid for laying feed	Dol. per ton	173	172	174	173	218	219	215	215
Egg-feed price ratio	Pounds	6.6	5.9	6.3	6.0	5.9	5.7	5.7	6.0
Stocks, first of month:									
Shell	Thou. cases	38	47	24	22	31	22	19	32
Frozen	Mil.	23.4	22.1	23.8	23.4	24.3	24.5	24.2	22.3
Replacement chicks hatched	Mil.	38.1	42.1	46.3	47.8	37.1	35.7	43.8	46.6
		Poultry							
Federally inspected slaughter, cert:									
Broilers	Mil. lb.	955.2	867.7	899.1	977.7	965.5	849.7	998.7	1,017.9
Turkeys	Mil. lb.	141.1	109.4	123.2	141.4	140.0	118.6	134.0	149.8
Price at farm, live weight:									
Broilers	Ct. per lb.	27.1	25.1	24.0	22.6	30.2	30.4	29.7	26.8
Turkeys	Ct. per lb.	38.8	36.3	35.8	33.7	39.8	38.9	40.3	38.4
9-city wholesale broiler price	Ct. per lb.	45.8	42.7	40.5	38.9	49.5	50.3	48.2	44.4
Broiler-feed price	Dol. per ton	193	194	193	193	237	238	229	234
Broiler-feed price ratio	Pounds	2.8	2.6	2.5	2.3	2.5	2.6	2.6	2.3
Turkey-feed price	Dol. per lb.	204	202	203	200	257	255	254	254
Turkey-feed price ratio	Pounds	3.8	3.6	3.5	3.4	3.1	3.1	3.2	3.0
Stocks, first of month:									
Broilers, fryers. roasters	Mil. lb.	30.6	27.3	31.1	31.2	22.4	27.1	26.8	24.8
Turkeys	Mil. lb.	240.0	246.8	225.0	208.9	198.0	207.9	207.9	220.7
Total poultry	Mil. lb.	386.9	385.1	366.4	361.0	339.0	359.0	354.2	372.7
Average weekly placement of									
broiler chicks in 21 States	Mil.	78.1	80.3	82.8	82.3	79.4	81.9	85.6	85.7

Table 2--Retail prices and price indexes for eggs and poultry 1980-81

Month and year	Retail price[1] Eggs	Frying chicken	Turkey	Retail price index[2] Eggs	Fresh whole chicken	Fresh & Frozen chicken parts	Other poultry	Poultry
	Cents per dozen	Cents per pound	Cents per pound	1967 = 100	1967 = 100	December 1977 = 100	December 1977 = 100	1967 = 100
1980								
Jan.	88.5	69.0	89.4	178.2	191.1	120.7	119.3	187.8
Feb.	79.2	69.1	88.0	157.2	183.6	116.8	118.8	182.6
Mar.	81.6	67.9	86.9	164.5	179.5	116.8	118.2	180.7
Apr.	80.5	65.1	84.9	161.2	174.7	114.5	117.3	177.2
May	71.1	64.9	83.4	148.4	172.9	114.4	117.4	176.5
June	74.8	65.8	83.5	147.9	176.3	115.7	115.9	177.9
July	86.3	73.6	85.3	154.2	193.6	120.9	117.0	187.9
Aug.	85.9	75.4	87.0	178.3	205.3	127.8	120.3	197.5
Sept.	88.8	79.8	90.0	179.9	214.0	134.0	122.9	205.2
Oct.	86.4	78.9	91.7	175.3	216.7	134.7	128.7	209.1
Nov.	91.6	77.0	97.6	185.2	208.7	131.8	128.0	204.1
Dec.	101.7	76.5	97.9	206.6	206.9	131.6	126.6	202.7
Year	84.6	71.9	95.7	169.7	193.6	123.3	120.9	190.8
1981								
Jan.	93.7	75.4	97.9	190.2	202.5	132.7	128.7	202.4
Feb.	92.8	76.5	98.1	188.2	207.0	131.9	128.5	203.7
Mar.	88.2	75.9	98.3	180.5	203.1	131.6	127.6	201.6
Apr.	90.9	73.7	95.5	184.3	198.0	127.5	125.9	196.8

[1]Estimated average price for 4 regions for Grade A large eggs, Grade A frying chicken, and 8-16 pound young hen turkey. [2] Consumer Price Index (CPI) for all urban consumers published by Bureau of Labor Statistics (BLS).

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Summary

Higher costs of feed and other inputs relative to product prices caught poultry and egg producters in a cost/price squeeze. However, rising pork prices and the continued strong export demand for poultry products may bolster prices in the second half of the year. These developments, coupled with lower feed costs if large crops materialize, may permit producers to recoup some losses during the last half of 1981. Also, a possible tax cut could provide more strength to meat prices, depending on its impact on personal income.

Following negative returns for most of last year, egg producers added fewer pullets to laying flocks. Also, continued losses during January-March have not encouraged producers to increase replacement pullets. Producers culled fewer hens than last year, and the rate of lay remained near a year earlier. With fewer replacements, producers could expand output only by delaying culling, but the rate of lay for old hens would be less, possibly pulling down the rate for all hens. So, the potential for expanded production seems limited during the rest of the year.

May egg prices in New York averaged about 67 cents a dozen, 6 cents below April but 12 cents above a year ago. Prices could average 69 to 71 cents for the second quarter and should strengthen seasonally in the third quarter. This year, a rise in meat prices may add a little more strength to egg prices, which may average 74 to 77 cents a dozen during July-September.

Broiler meat production will continue to increase this year. During the first quarter, output rose 3 percent from a year ago. Weekly slaughter reports and chick placements suggest that April-June broiler production will be 2 to 4 percent above second-quarter 1980's 2.9 billion pounds. Output during July-September is expected to remain almost the same as the previous quarter and should rise 9 to 11 percent from last year's depressed levels.

The weighted-averaged broiler price for nine cities in May was about 46 cents a pound, 5 cents above last year. Second-quarter prices will likely average 45 to 47 cents a pound. Bolstered by higher red meat prices, especially pork, broiler prices could average 51 to 54 cents during the summer.

Profitable operations in the last half of 1980 encouraged turkey producers to increase output for 1981. In the first quarter, production was 5 percent above a year earlier. Second-quarter output is expected to increase 5 to 7 percent from 1980. July-December production may increase slightly if poult losses are down from last year and slaughter weights are up.

During the first quarter, New York wholesale prices for 8- to 16-pound young hen turkeys declined seasonally after the holidays but were above last year. Prices stayed relatively flat the last few months and averaged about 63 cents a pound in May, up from 53 cents a pound in 1980. Cold storage stocks of frozen turkey are rising earlier than is seasonally normal and may temper prices later in the year. In second-half 1981, New York wholesale prices for young hen turkeys will likely average about the same as last year.

Poultry, livestock, and egg production and prices
(All percent changes shown are from a year earlier)

Item	1980 I	1980 II	1980 III	1980 IV	1981 I	1981 II 1/	1981 III 1/	1981 IV 1/
				Million pounds				
Broilers 2/	2,722	2,923	2,759	2,685	2,814	3,025	3,030	2,830
% change	+7	+3	-3	+1	+3	+3	+10	+5
Turkey 2/	374	523	705	701	393	555	710	710
% change	+38	+12	-2	-3	+5	+6	+1	+1
Beef 3	5,249	5,251	5,334	5,586	5,553	5,275	5,425	5,650
% change	-5	+3	+3	+3	+6	0	+1	+1
Pork 3/	4,125	4,299	3,756	4,251	4,073	3,925	3,500	3,775
% change	+22	+15	-1	-2	-1	-9	-7	-11
Total 4/	12,641	13,162	12,771	13,408	13,018	12,960	12,835	13,135
% change	+6	+7	0	+1	+3	-2	+1	-2
				Million dozen				
Eggs	1,466	1,425	1,432	1,483	1,449	1,425	1,430	1,480
% change	+3	-1	0	0	-1	0	0	0
				Cents/pound				
Broilers, 9-city 5/	43.0	41.1	53.3	49.9	49.3	45-47	51-54	50-53
Turkeys, New York 6/	59.0	54.3	68.3	73.0	61.3	61-63	66-69	73-76
				Dollars/cwt.				
Choice steers Omaha	66.9	64.6	71.2	65.5	62.0	66-68	68-72	66-70
Barrows & gilts, 7 mkts	36.5	31.2	46.2	45.4	41.1	42-44	50-53	49-52
				Cents/dozen				
Eggs, New York 7/	62.1	58.2	70.3	76.9	72.6	69-71	74-77	76-79

1/ Forecast.
2/ Federally inspected slaughter.
3/ Commercial production.
4/ Includes veal, lamb, and mutton.
5/ Wholesale weighted average.
6/ 8-16 pound young hens.
7/ Cartoned, consumer Graded-A large, sales to volume buyers.

Poultry and Egg Situation

FACTORS AFFECTING THE POULTRY AND EGG INDUSTRIES

Prospects for the poultry and egg industries should improve as red meat supplies decline during the summer. Costs will likely remain high by historic standards but may moderate slightly from last winter. Consumers' disposable incomes may rise as the economy strengthens.

Production Costs

Production costs will likely continue to rise as inflation affects many of the inputs purchased by the poultry and egg industries. Feed costs will likely remain high but may soften during the summer, if crop prospects are favorable.

Both foreign and domestic demand and crop developments for corn will heavily influence prices through the summer. Exports of corn and soybeans ran below expectations earlier in the year, and the removal of the Russian grain embargo has not generated more exports so far. The 1980/81 farm price of corn is expected to average about $3.20 a bushel, compared with $3.20 in 1979/80. In mid-May, the farm price of corn averaged $3.20 a bushel, compared with $2.42 in May 1980.

Soybean meal (44-percent protein) at Decatur averaged about $225 a short ton in May, up from $181 a year ago. The projected average 1980/81 soybean meal price is $225. The large South American soybean crop and weak demand have put some pressure on U.S. prices, which have declined from earlier highs.

On April 1, farmers indicated planting intentions for corn and soybeans only fractionally changed from last year. Soil moisture improved in late May increasing prospects for good crops. However, the percentage of corn and soybeans planted as of May 24 were below average. If timely rains are received during the growing season, corn and soybean supplies should be much improved over this year. Therefore, feed prices could be relatively favorable for the poultry and egg industries in the coming crop year.

In some sections of the country, especially the Southeast where a record wheat acreage was planted, poultry and egg producers may want to substitute local new-crop wheat for some of the corn in their feeds. A record 1981 wheat crop may lower prices enough that wheat could be profitably substituted for corn. If this is the case, reduced demand would in turn weaken corn prices.

Red Meat Supplies to Trail 1980

Supplies of red meats are expected to be 2 to 3 percent below 1980 in the second and third quarters of 1981. Beef production may be near year-earlier levels in the second quarter before rising above a year earlier for the third quarter. Second quarter production is expected to be reduced from the large first-quarter level because fewer cattle will be finished in feedlots. In the third quarter, cattle placed on feed in the spring will be ready for market and grass fed slaughter is likely to increase seasonally.

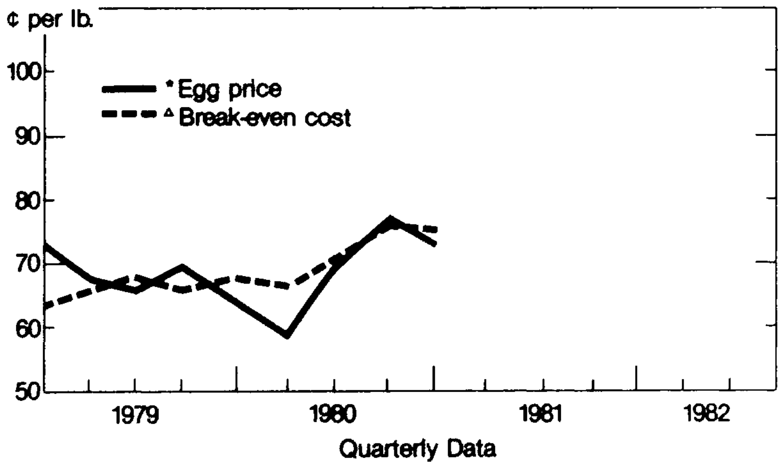
Pork production is declining, reflecting producers reaction to financial losses. Second-quarter pork output may be down 9 percent and third quarter could fall 6 to 8 percent from a year earlier. The mild winter and spring helped improve weight gains and tended to increase output in relation to inventories. Because of the heavier weights, production in the first quarter was larger than suggested by the December Hogs and Pigs report.

Economy to Grow

The economy will likely be sluggish for the remainder of 1981 and will not match the 8.4 percent increase of the first quarter. High interest rates, inflation, and high unemployment continue to cloud the outlook for meats. Overall, the economy will likely give little strength to poultry and egg demand. Inflation may hold real incomes near to or below the present, and consumers will continue to be value sensitive. However, a tax cut could provide more strength to meat prices, depending on its impact on personal income.

Several factors may affect the demand for poultry products. If the purchases of non-durable items (including meats) in consumers' budgets expands, because they are not buying durables, the poultry and egg industries could benefit. However, those unemployed may have to cut back—especially if unemployment compensation and food stamps are also reduced. As eating out is cut back, the demand for poultry products could be reduced in the food service sector but may shift to home consumption.

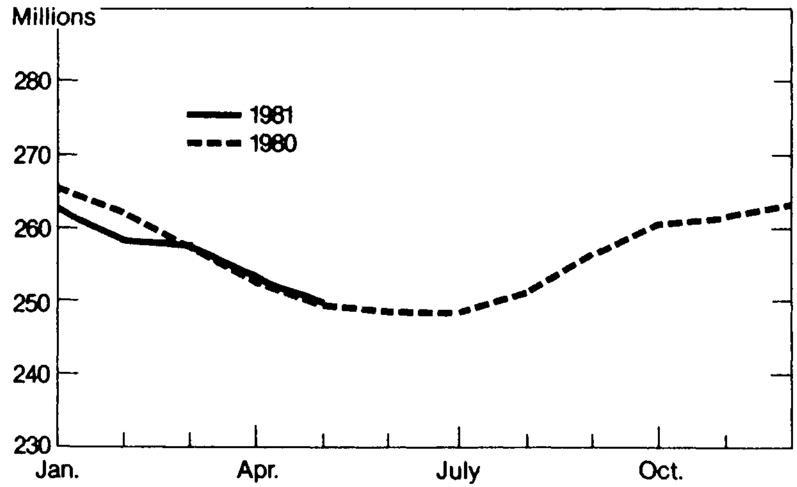
Eggs
Break-Even Cost and Market Price



*14 area metro price. ΔEstimated U.S. break-even cost.

USDA Neg. ESS 2609-81 (5)

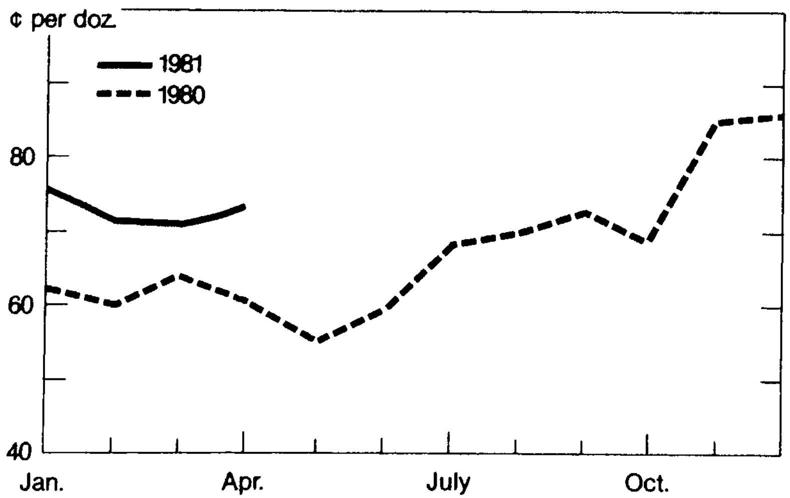
U.S. Table Egg Flock Size*



*Number of layers on hand, first of month.

USDA Neg. ESS 320-81 (5)

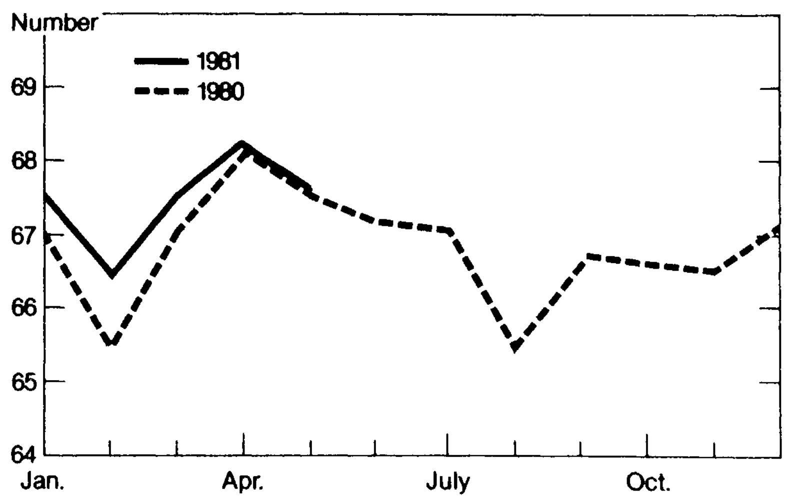
Cartoned Egg Prices, New York*



*Sales to volume buyers, consumer grade A large.

USDA Neg. ESS 60-81 (5)

Rate of Lay Table Eggs*



*Eggs per 100 layers, first of month.

USDA Neg. ESS 321-81 (5)

Egg production this spring and summer may be near last year, principally because of delayed culling. Strengthened by lower per capita supplies and continued strong export demand, egg prices are expected to average above July-December 1980 prices.

Egg Production to Stay Flat

Egg production in the first 4 months of 1981 was 1 percent lower than in 1980. The decline was due to one less production day this year, with last year being a leap year. The rate of lay has remained very near the previous year's high, as producers continue to cull nonproductive hens from the flocks. The percentage of hens with molt completed is high relative to last year, but this percentage has declined as prices slipped during the first quarter. On January 1, the percent of the flock with molt complete hit an alltime high of 18 percent in response to profitable operations in fourth-quarter 1980. On May 1, the percent of the flock with molt complete was down to 15.2.

Layer numbers on May 1 were slightly above year earlier levels. However, numbers will likely decline, because producers will increase cull hen slaughter after they delayed culling to meet the Easter demand for extra eggs. The laying flock during the second and third quarters is expected to remain near a year-earlier levels. The number of replacement pullets hatched has been below a year earlier every month since September 1979. In April, egg-type chick hatch was 2 percent below April 1980. However, replacements and reduced culling of old hens have been adequate to maintain flocks.

The potential for expanded egg production is limited to the delayed culling of present layers, because replacement pullets are fewer. Even if culling was delayed, output would not expand proportionally because the rate of lay would likely be lower for old hens. Thus, output for the rest of 1981 will likely remain near last year.

Egg Prices Above 1980

Prices for cartoned Grade A large eggs in New York averaged 72.6 cents a dozen in first-quarter 1981, up from 62.2 cents in 1980. Prices in April averaged 73 cents—up about 13 cents from last year—and were strengthened because of Easter. Prices have declined since the holiday (April 19), averaging about 67 cents in May. April-June prices for cartoned large Grade A eggs in New York are expected to average 10 to 13 cents above the 58 cents of a year earlier.

Egg prices in the rest of 1981 will likely rise from second-quarter lows. The usual seasonal increase in price may be strengthened further by increasing prices for other high protein foods. Prices for cartoned large Grade A eggs in New York may average 75 to 80 cents a dozen in second-half 1981, compared with 74 cents a year earlier. More eggs will be needed for hatching use thereby reducing supplies. Assuming normal crop conditions, egg producers may achieve profits in the second half of the year.

Cold Storage Lower but Breaking Use Up

Stocks of frozen egg products on May 1 totaled 22.1 million pounds, compared with 25.9 million a year earlier. Because of high interest rates and the increasing use of fresh products, stocks were at an alltime low on this date.

The movement of shell eggs to breaking plants during January-March was up 4.6 million dozen from the 173 million dozen of a year earlier. Weekly reports show that April breakings were also above a year ago.

Exports Increase

Export demand continued strong in the first quarter of 1981. Exports of shell eggs and egg products totaled nearly 54 million dozen (shell equivalent), up 84 percent from January-March 1980. Japan continued as the major importer of eggs and egg products during the first quarter, as was the case in all of 1980. Exports were equal to slightly less than 4 percent of first-quarter production, compared with 2 percent last year. Shell egg exports, 29 million dozen, equalled 2 percent of first-quarter output.

First-Half 1982 Prospects

The number of hens and pullets in laying flocks during the second-half of 1981 and into 1982 will likely remain near a year earlier. Second-half 1981 prices will probably stay above a year ago.

Estimated January-June 1982 egg price/production relationship[1]

Total egg production	Estimate change from year earlier	New York cartoned large egg price[2]
Million dozens	*Percent*	*Cents*
2,960	+3	66-68
2,935	+2	68-72
2,905	+1	72-76
2,875	0	[3]76-80
2,845	-1	80-84
2,820	-2	84-88
2,790	-3	88-92

[1]Based on historical relationships. [2]USDA, consumer Grade A, volume buyers, store door delivery. [3]The estimated 76-80 cents per dozen is based on prospective conditions for general economic activity, hatching and breaking use, and assumes no change from the estimated 1980 first half total egg production.

The prices, other than the base price, were estimated by assuming the same conditions as under the base except that total egg production was changed.

Table 3—Layers on farms and eggs produced

Calendar quarters	Number of layers		Eggs per layer		Eggs produced	
	1980	1981	1980	1981	1980	1981
	Mil.		No.		Mil. doz.	
I	291	290	60.5	59.9	1,466.1	1,448.7
II	281		60.9		1,424.7	
III	285		60.4		1,431.8	
IV	293		60.7		1,483.3	
Annual	287		242.4		5,805.8	

Table 4—Egg-type chick hatchery operations

Month	Hatch			Eggs in incubators first of month change from year earlier	
	1979	1980	1981	1980	1981
	Thou.			Pct.	
January	39,509	38,090	37,124	-3	-3
February	38,527	42,082	35,701	3	-7
March	50,114	46,339	43,834	-11	-5
April	52,419	47,758	46,615	-12	-3
May	55,872	50,831		-13	-9
June	47,805	42,168		-16	
July	42,822	37,767		-12	
August	41,886	37,876		-9	
September	36,599	37,276		-1	
October	39,471	37,161		-9	
November	37,541	33,785		-7	
December	36,338	35,835		-3	

Table 5—Force moltings and light-type hen slaughter, 1979-81

Month	Forced molt layers 1/						Light-type hens slaughtered under federal inspection		
	Being molted			Molt completed					
	1979	1980	1981	1979	1980	1981	1979	1980	1981
	Percent			Percent			Percent		
January	2.5	2.2	3.4	14.1	14.0	18.0	15,508	19,051	17,868
February	3.5	3.6	3.6	13.8	14.0	16.5	13,529	18,764	14,638
March	3.8	3.6	3.6	13.4	13.5	15.6	15,947	15,816	17,557
April	2.9	3.2	3.7	13.1	13.0	15.5	16,552	17,458	16,561
May	4.5	5.3	5.7	12.0	11.8	15.2	14,142	14,264	
June	5.0	5.4		12.3	14.2		11,570	11,786	
July	4.1	4.4		13.7	14.5		11,985	11,078	
August	4.3	4.6		14.0	16.0		14,086	9,940	
September	4.1	3.9		14.5	16.5		12,315	10,783	
October	4.2	4.7		14.2	16.2		14,910	14,253	
November	4.1	4.8		14.8	16.8		11,618	9,168	
December	2.4	2.8		15.0	17.9		12,551	13,284	

1/Percent of hen and pullets of laying age in 17 selected states.

Table 6— Shell eggs broken and egg products produced under federal inspection, 1980-81

Period 1/	Shell eggs broken	Egg products produced 2/		
		Liquid 3/	Frozen	Dried
	Thou. doz.	Thou. lbs.	Thou. lbs.	Thou. lbs.
1980				
Dec. 30 - Jan. 26	52,362	30,663	23,822	5,934
Jan. 27 - Feb. 23	55,522	34,204	25,712	6,486
Feb. 24 - Mar. 22	52,116	32,590	22,799	6,011
Mar. 23 - Apr. 19	52,518	29,519	25,531	6,081
Apr. 20 - May 17	56,905	33,715	26,306	6,407
May. 18 - June 14	56,935	33,349	26,386	6,536
June 15 - July 12	58,904	33,836	25,188	7,717
July 13 - Aug. 9	59,762	32,585	25,889	7,044
Aug. 10 - Sept. 6	57,869	33,450	24,698	5,443
Sept. 7 - Sept. 30	50,143	28,976	22,390	4,782
Oct. 1 - Nov. 1	66,935	37,219	31,746	7,497
Nov. 2 - Nov. 29	51,753	31,221	24,090	6,188
Nov. 30 - Dec. 27	50,759	29,370	23,157	5,744
Dec. 28 - Jan. 24	57,114	33,752	26,471	6,586
1981				
Jan. 25 - Feb. 21	52,488	33,703	23,741	6,101
Feb. 22 - Mar. 21	58,811	36,152	27,038	6,770
Mar. 22 - Apr. 18	51,901	32,496	24,839	5,574

1/Weeks in 1980 and 1981. 2/Includes ingredients added. 3/Liquid egg product produced for immediate consumption and for processing.

Table 7—U.S. egg exports to major importers, January-March 1980-81[1]

Country or area	1980	1981
	1,000 dozen	
Japan	6,288	19,613
Iraq	0	4,538
Hong Kong	1,306	4,009
United Arab Emirates	337	3,741
Canada	2,939	3,059
West Germany	1,774	2,519
Mexico	1,448	2,315
Lebanon	17	2,072
Venezuela	600	1,947
Saudi Arabia	3,648	1,817
Romania	0	1,481
Republic of South Africa	0	1,182
Trinidad-Tobago	626	825
Egypt	0	636
United Kingdom	908	566
Other	9,377	3,636
Total	29,268	53,991

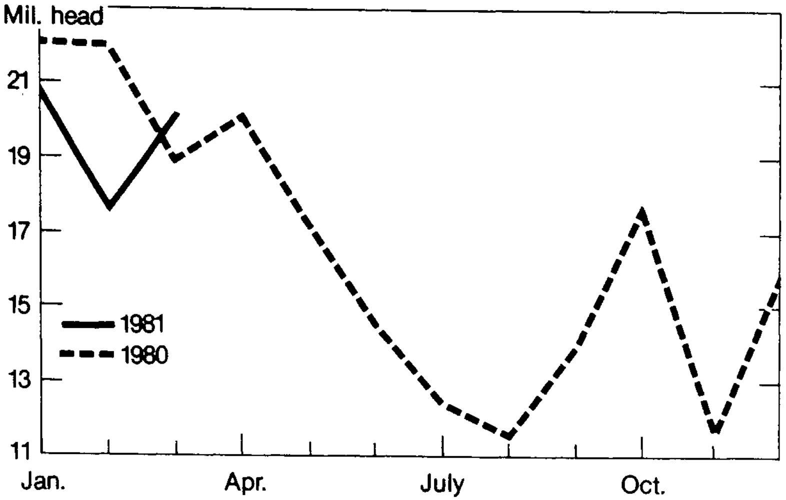
[1] Shell eggs plus shell equivalent of egg products exported.

Table 8– Total eggs: Supply and utilization, 1960-80[1]

Year	Supply				Utilization					
							Domestic disappearance			
	Production	Imports[2]	Beginning stocks	Total supply	Ending stocks	Exports and shipments	Eggs used for hatching	Military	Civilian	
									Total	Per capita
	Million dozen									Number
1960	5,134	2	65	5,201	51	42	287	63	4,758	320.5
1961	5,202	2	51	5,255	48	40	302	64	4,801	318.1
1962	5,297	1	48	5,346	50	32	305	70	4,889	319.5
1963	5,292	1	50	5,343	44	42	313	67	4,877	313.8
1964	5,435	2	44	5,481	46	31	320	76	5,008	317.8
1965	5,463	([3])	46	5,509	41	39	336	93	5,000	313.1
1966	5,517	14	41	5,572	28	43	365	102	5,034	312.3
1967	5,777	4	28	5,809	71	55	358	110	5,215	320.7
1968	5,680	5	71	5,756	56	46	361	108	5,185	315.5
1969	5,629	9	56	5,694	34	41	389	83	5,147	310.3
1970	5,704	27	34	5,765	39	45	402	78	5,201	309.4
1971	5,806	10	39	5,855	58	44	389	60	5,304	311.7
1972	5,742	1	58	5,801	53	56	391	64	5,237	304.4
1973	5,502	13	53	5,568	34	49	392	42	5,051	291.4
1974	5,461	13	34	5,508	42	57	366	38	5,005	286.2
1975	5,382	5	42	5,429	28	62	372	43	4,924	279.6
1976	5,377	3	28	5,408	21	65	419	45	4,857	273.8
1977	5,408	14	21	5,443	24	91	427	36	4,865	272.0
1978	5,608	11	24	5,643	20	120	466	28	5,009	277.5
1979	5,777	10	20	5,807	19	104	498	25	5,162	283.5
1980[4]	5,806	5	19	5,830	19	167	499	24	5,121	278.7

[1]Calendar years. [2]Shell eggs and the approximate shell-egg equivalent of egg products. [3]Less than 500,000 dozen. [4]Preliminary.

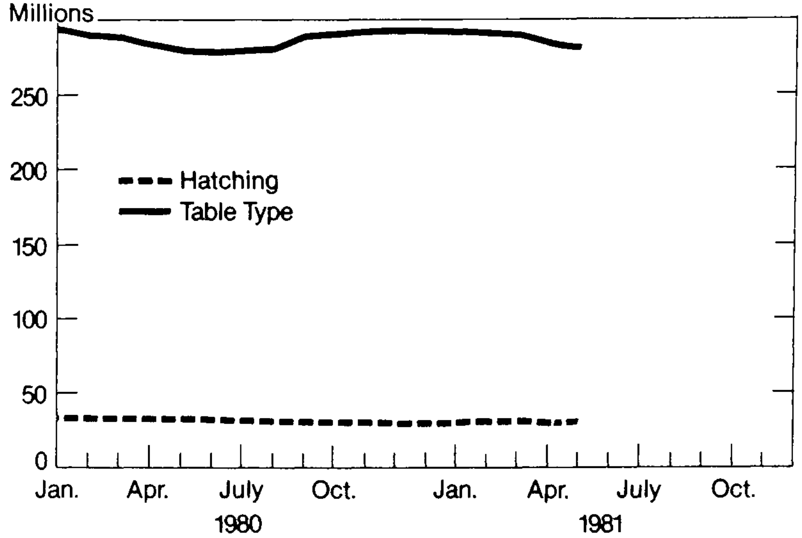
Mature Chicken Slaughter*



*Fowl from breeder and market egg flocks.

USDA Neg. ESS 621-81 (5)

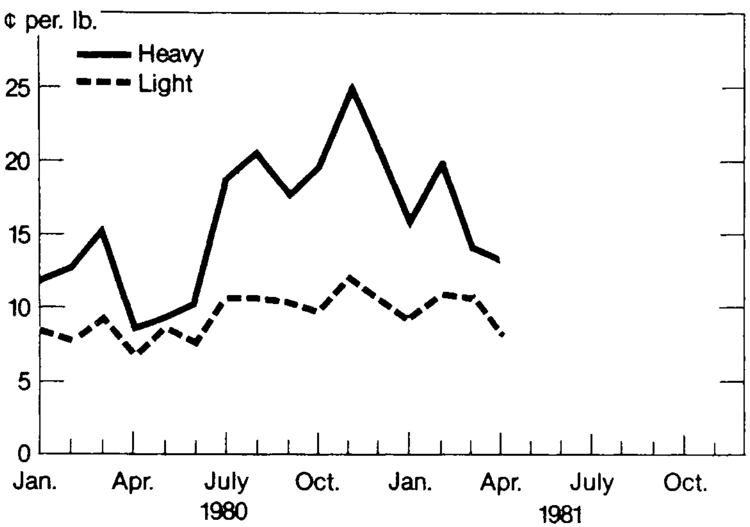
U.S. Flock Size*



*Number of layers on hand, first of month.

USDA Neg. ESS 620-81 (5)

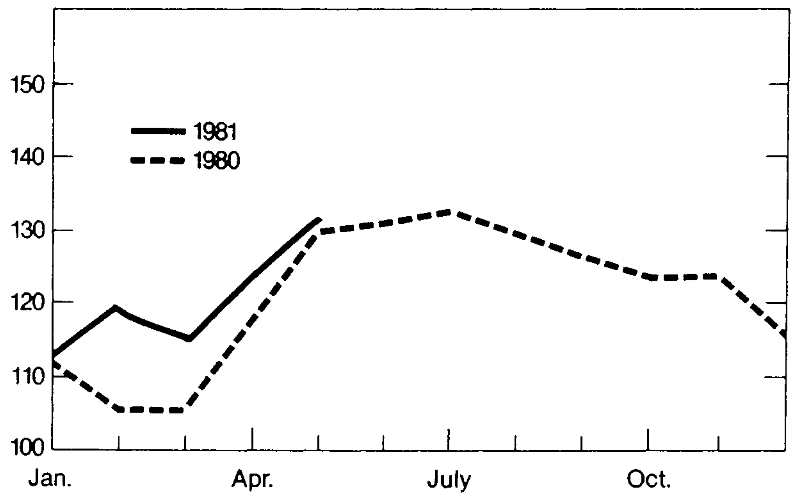
Prices of Heavy and Light Hens at Farm*



*Southeast area. (Includes AL, GA, MS, TN, FL, NC and SC.)

USDA Neg. ESS 323-81 (5)

Mature Chicken Cold Storage Stocks*



*First of month.

USDA Neg. E[illegible]-81 (5)

Egg production costs for nonfeed items will likely continue to increase. If farmers' intentions to plant about the same number of acres to corn and soybeans as last year are realized and the weather is favorable, production would be much improved over last year. Feed prices could weaken from this year's highs, reducing the costs of producing eggs.

Demand for eggs in the first half of 1982 may be slightly stronger than the past 2 years. Supplies of other high protein foods may be slightly less, which would help strengthen egg prices. If total egg output in first-half 1982 is up about 1 percent from a year earlier, January-June 1982 prices for cartoned Grade A large eggs in New York would be expected to average 1 to 4 cents above the 72 cents estimated for the first half this year. Output at year-earlier levels would likely cause prices to average 76 to 80 cents.

USDA Purchases

USDA has purchased 1.8 million pounds of dried egg mix for distribution to needy families and supplemental food programs. In 1980 USDA purchased nearly 2.2 million pounds under this program and about 4 million pounds for the school breakfast program. Shipments are to be made during July 1 to July 15.

MATURE CHICKENS

Mature chickens (over 6 months of age) slaughtered under Federal inspection during the first quarter of 1981 numbered 59 million birds, 7 percent less th n the similar period in 1980. Slaughter of heavy-type chickens (primarily from broiler breeder flocks) totaled 9 million head, down 7 percent from 1980. Light-type (primarily from flocks producing table eggs) numbered 50 million head, also down 7 percent. Broiler producers reduced culling to increase broiler output, while table-egg producers cut back culling to maintain egg production. In 1980, both types of producers were culling their flocks heavily in response to low returns.

Slaughter of mature chickens usually increases after Easter as producers reduce their egg laying flocks in response to lower egg demand in the spring. Weekly statistics showed a slight increase in light-type slaughter the week after Easter. Heavy-type chicken slaughter during April was above year a earlier, which indicates that broiler producers may be returning to a more normal culling pattern. Also mature chicken slaughtering capacity is extremely limited; producers generally must schedule slaughter in advance.

Slaughter in 1981 may be 1 to 3 percent above 1980. Because broiler producers should have their hatchery operations back on schedule after the effects of 1980's weather, culling should return to normal and slaughter may increase somewhat—especially in the second half. However, slaughter from laying flocks may be off slightly from 1980, because producers culled heavily early last year. As egg prices approach profitable levels, producers will reduce culling to maintain egg output.

BROILERS

Broiler production in the summer and fall is expected to average 6 to 9 percent above a year earlier. Meanwhile, prices may average 51 to 54 cents a pound this summer before declining seasonally in the fall. Sharply lower pork supplies will help support broiler prices, even with increased broiler production.

Output Continues to Expand

Even though broiler producers have been in a price/cost squeeze since third-quarter 1980, they are continuing to keep output high. Producers lowered their hatchery supply flocks in early 1980 as returns dropped. the hot summer further reduced hatchery output. The hot weather also reduced broiler production, which helped stimulate higher prices, encouraging producers to expand. Increased pullet placements in the hatchery supply flocks during the fall and winter will push the flock to a record number by October 1981.

To expand output in late 1980 and early 1981, producers delayed culling of their hatchery supply flocks. After trailing the year earlier level during the fall and winter, slaughter of heavy-type mature chickens this April rose above a year earlier. This suggests that producers are returning to a more normal culling pattern in their hatchery supply flocks. The slaughter of heavy-type mature chickens should continue above last year's reduced levels for the rest of 1981.

Although producers are losing money, broiler production has been on the rise because producers anticipate improved returns as demand increases during the summer. Moreover, the producers are anticipating an increase in red meat prices, principally pork, will strengthen prices.

Output of broiler meat in federally inspected slaughter plants during January-March totaled 2,814 million pounds (ready-to-cook), 3 percent above first-quarter 1980. Most of the increase was because more birds were marketed, but the average weight per bird was also up slightly.

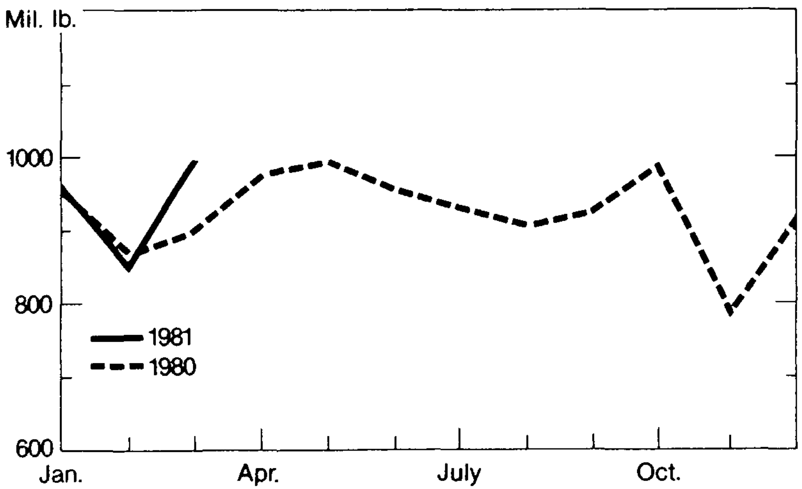
Weekly reports on slaughter and broiler chick placements indicate that broiler meat output in the second quarter will be up about 3 percent from a year earlier. The number of eggs going into incubators for broiler marketings in early summer has continued about 3 to 5 percent above last year. However, by this time last year, egg sets had been trailing year-earlier levels for a couple

Table 9— Mature chicken supply and utilization, 1979-81

Year	Production	Beginning stocks	Total supply	End stocks	Exports and shipments	Military	Civilian disappear-ance	Per capi[illegible]
	Million pounds							Pounds
1979:								
January	63.1	81.8	144.9	88.1	4.7	0	52.1	.2
February	55.3	88.1	143.4	83.1	3.3		56.9	.3
March	66.8	83.1	149.9	82.3	4.4	.2	63.1	.3
April	67.7	82.3	150.0	88.3	3.5		58.2	.3
May	61.9	88.3	150.2	90.5	2.9		56.8	.3
June	57.5	90.5	148.0	104.2	3.5		40.3	.2
July	54.8	104.2	159.0	109.7	4.3	.3	44.7	.2
August	67.8	109.7	177.5	112.4	3.3		61.8	.3
September	59.6	112.4	172.0	121.6	4.0		46.5	.2
October	71.0	121.6	192.6	126.0	4.3		62.3	.3
November	51.4	126.0	177.4	118.2	4.6		54.6	.2
December	53.8	118.2	172.0	111.5	8.6		51.9	.2
1980								
January	84.5	111.5	196.0	106.6	2.4	.0	87.0	.4
February	80.9	106.6	187.5	106.5	1.7	.2	79.1	.4
March	72.2	106.5	178.7	117.9	2.4	.7	57.7	.3
April	78.1	117.9	196.0	129.6	4.6	.0	61.7	.3
May	66.3	129.6	195.9	130.9	2.8	.0	62.2	.3
June	56.7	130.9	187.6	132.4	8.8	.0	46.3	.2
July	44.7	132.4	177.1	129.5	8.3	.0	39.3	.2
August	42.8	129.5	172.3	126.2	4.4	.1	41.8	.2
September	55.7	126.2	182.9	123.4	1.9	.1	57.6	.3
October	69.4	123.4	192.8	123.3	7.5	.1	62.0	.3
November	47.3	123.3	170.6	115.1	5.9	.1	49.6	.2
December	57.9	115.1	173.0	114.1	8.8	.1	50.0	.2
1981								
January	73.6	114.1	187.7	119.4	9.4	.0	58.7	.3
February	65.8	119.4	185.2	115.5	3.6	.0	66.0	.[illegible]
March	79.4	115.5	194.9	123.3	3.0	.6	67.9	.[illegible]

*Totals may not add due to rounding.

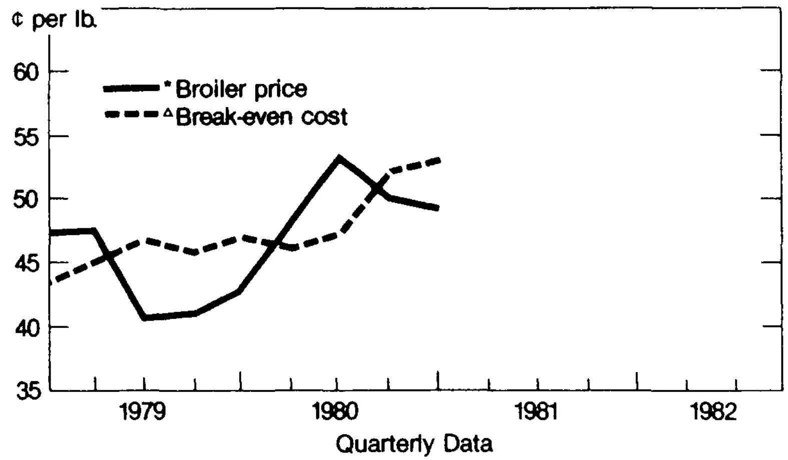
Broiler Slaughter*



*Certified ready-to-cook, under Federal inspection.

USDA Neg. ESS 1019-81 (5)

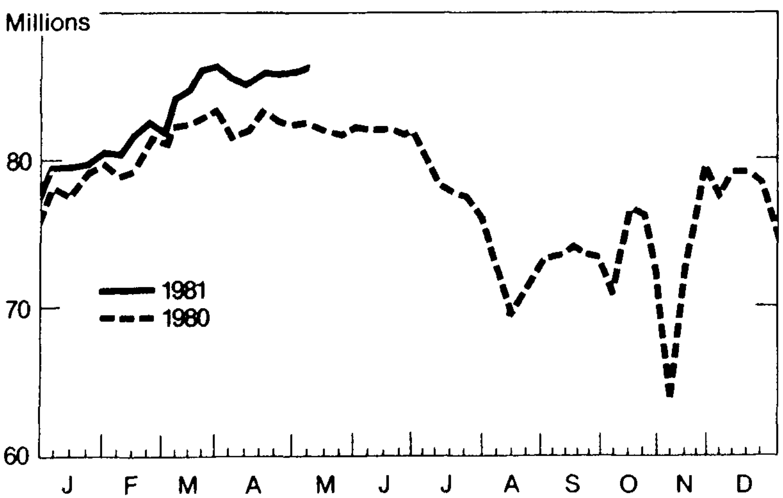
Broilers
Break-Even Cost and Market Price



*Nine city weighted average. △Estimated U.S. break-even cost.

USDA Neg. ESS 2610-81 (5)

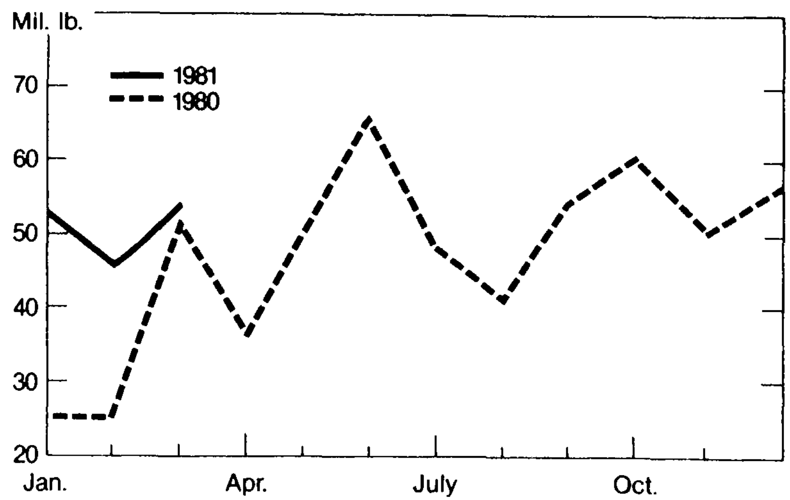
Weekly Broiler Chick Placements*



*21 important states.

USDA Neg. ESS 8223-81 (5)

Broiler Exports*



*Ready-to-cook weight.

USDA Neg. ESS 2707-81 (5)

Table 10– Broiler: Eggs set and broiler chicks placed weekly in 21 principal broiler producing States, 1980-81*

Week ending	Eggs set 1980	Eggs set 1981	Percent of previous year	Chicks placed 1980	Chicks placed 1981	Percent of previous year
	Thousands		Percent	Thousands		Percent
January						
3	98,882	99,286	100	75,929	77,800	102
10	99,412	100,711	91	78,027	79,613	102
17	98,001	101,178	93	77,579	79,352	102
24	98,427	102,690	94	79,000	79,694	101
31	100,402	102,352	92	79,723	80,501	101
February						
7	101,261	101,633	100	78,847	81,300	103
14	101,624	104,592	103	79,181	81,931	103
21	101,585	106,026	104	81,443	82,470	101
28	103,298	107,406	105	81,854	81,746	100
March						
7	102,950	105,714	104	82,338	84,216	102
14	100,766	106,042	105	82,385	85,355	104
21	101,630	105,567	104	82,862	86,158	104
28	103,405	106,519	103	83,611	86,526	103
April						
4	101,606	105,866	104	81,419	85,768	105
11	101,807	106,222	104	81,875	84,992	104
18	101,650	106,188	104	83,422	85,874	103
25	100,144	105,449	105	82,603	85,832	104
2	100,929	105,033	104	82,356	85,803	104
May						
9	101,337	105,218	104	81,955	86,273	105
16	101,030	105,747	105	80,250	85,063	106
23	101,184	104,702	103	81,674	85,719	105
30	100,653			82,230		
June						
6	101,091			82,013		
13	100,067			82,109		
20	97,737			81,695		
27	97,515			82,082		
July						
4	98,169			80,366		
11	97,387			78,215		
18	95,236			77,564		
25	93,003			77,532		
1	92,318			76,074		
August						
8	94,228			72,585		
15	94,462			69,461		
22	95,343			71,291		
29	95,334			73,064		
September						
5	94,505			73,393		
12	94,191			73,531		
19	91,749			74,209		
26	98,499			73,507		
3	97,352			73,439		
October						
10	93,205			70,937		
17	81,513			76,642		
24	92,807			76,214		
31	100,624			73,339		
November						
7	97,558			64,030		
14	98,723			72,411		
21	98,670			79,493		
28	98,200			77,447		
December						
5	92,755			77,448		
12	97,379			73,189		
19	98,991			78,480		
26	99,052			73,957		

*Weeks in 1981 and corresponding weeks in 1980.

Table 11--Broiler chicks hatched and pullet chicks placed in hatchery supply flocks

Month	Broiler-type chicks hatched			Pullet chicks placed in broiler hatchery supply flocks: Monthly placements			Cummulative placements 7-14 months earlier		
	1979	1980	1981	1979	1980	1981	1980	1981	1982
	Million			Thousand			Thousand		
January	340.8	361.9	369.4	3,541	3,336	3,523	28,589	26,093	
February	314.2	347.9	344.1	3,039	3,288	3,553	28,642	26,699	
March	368.8	382.7	398.7	4,004	3,110	4,119	28,393	26,465	
April	375.3	373.9	387.9	4,129	3,598	3,499	27,890	26,436	
May	392.9	383.9		3,960	3,307		27,730	27,081	
June	380.7	369.5		3,486	3,351		26,602	27,322	
July	365.9	362.2		3,144	3,477		25,705	27,819	
August	359.6	334.4		3,040	2,998		25,031	28,035	
September	320.8	330.2		3,038	3,357		24,883	28,237	
October	322.2	344.1		2,929	3,883		24,849	28,879	
November	307.8	330.8		2,876	3,351		25,407	29,380	
December	348.6	358.9		3,232	4,095		25,676		

Table 12-- Broiler supply and prices, by quarters, 1977-81

Year and quarters	Federally inspected slaughter: Number	Av. wt.	Liveweight pounds	Certified RTC wt.	Total production RTC 1	Per capita consumption	Prices: Farm	9-city
	Mil.	Lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.	Lbs.	Cts./lb.	Cts./lb.
1977								
I	782	3.82	2,985	2,156	2,201	9.8	23.5	40.9
II	869	3.80	3,305	2,399	2,447	10.8	24.4	42.3
III	884	3.78	3,340	2,424	2,474	10.9	24.6	42.4
IV	798	3.90	3,110	2,248	2,296	10.2	21.5	37.6
Year	3,334	3.82	12,741	9,227	9,418	41.7	23.5	40.8
1978								
I	831	3.88	3,226	2,327	2,385	10.5	24.2	41.8
II	909	3.87	3,519	2,547	2,610	11.6	28.7	47.6
III	922	3.84	3,540	2,567	2,630	11.5	28.0	46.6
IV	854	3.95	3,371	2,443	2,504	10.9	24.7	42.1
Year	3,517	3.88	13,656	9,883	10,129	44.5	26.4	44.5
1979								
I	907	3.90	3,541	2,551	2,616	11.4	28.5	47.5
II	1,011	3.90	3,936	2,844	2,914	12.8	28.2	47.7
III	1,009	3.92	3,951	2,855	2,926	12.7	23.6	40.8
IV	917	4.02	3,683	2,665	2,732	11.6	23.8	41.7
Year	3,843	3.93	15,111	10,916	11,188	48.5	26.0	44.4
1980								
I	950	3.96	3,759	2,722	2,786	12.0	25.6	43.0
II	1,016	3.96	4,027	2,923	2,989	12.6	23.5	41.1
III	991	3.83	3,796	2,759	2,817	11.9	31.8	53.3
IV	924	4.00	3,695	2,685	2,742	11.4	30.5	49.9
Year	3,881	3.94	15,277	11,089	11,334	47.9	27.8	46.8
1981								
I	969	4.01	3,883	2,814	2,874	12.0	30.1	49.3

1 Total production equals federally inspected slaughter plus other slaughter minus cut-up and further processing condemnations.

of months. If producers continue to set eggs at the pace that now appears likely, broiler meat output in July-September probably will be near the expected second quarter level and up 9 to 10 percent the reduced output of last year. With more normal weather than last summer, hatchability is expected to improve over a year ago.

With expectations of continual year-over-year declines in pork production through the fall and improved economic conditions, prospects for broiler producers appear more favorable. However, production usually declines seasonally as demand drops in the fall and winter. Fourth-quarter output is expected to be up about 5 percent from October-December 1980.

Broiler Prices to Increase

In spite of increased beef supplies and continued high pork production in the second quarter, broiler prices were above a year earlier. January-March wholesale prices in 9 cities averaged 49.3 cents a pound, up 6 cents from a year ago. Although production was up, expanding exports held per capita consumption to 1980 levels.

Wholesale prices in May 1981 were 5 cents above a year earlier but still 5.5 cents below the estimated cost of production. Prices usually strengthen in the spring and early summer when more chicken is used for barbecuing and picnics. Broiler prices are expected to average 45-47 cents a pound in the second quarter and in the third quarter may average 51-54 cents a pound.

Exports Increase

Young chicken (primarily broilers) exports during January-March rose 48 percent from a year ago climbing to 152 million pounds. Exports were equal to 5 percent of estimated total production, up from nearly 4 percent during January-March 1980. Japan continued as our largest customer, purchasing 20 percent of our exports. For all of 1980, Japan purchased 16 percent of the young chicken meat exported. While exports for the remainder of the year are not likely to exeeed the year-earlier level as much as they did during January-March, they are expected to continue well above last year.

Shipments of young chicken meat to Puerto Rico and the Virgin Islands (U.S. territories) through March totaled 39 million pounds, up 3 million pounds from 1980.

Broiler Prospects for the Fourth Quarter

The outlook for broiler producers during October-December appears more favorable than a year ago. Feed costs should be more favorable if moisture is adequate and farmers follow through with their planting intentions. However, nonfeed costs will likely continue to increase.

Consumer's incomes will probably improve, and levels during the fourth quarter will be above a year earlier. Consumer demand for meat should rise, but supplies of red meats are expected to be less than a year ago.

If competing meat supplies and consumer incomes turn out to be about as currently expected and broiler meat production increases 5 percent, the 9-city price during October-December 1981 likely will average 50 to 53 cents. However, if past relationships hold, output that is the same as 1980 would result in a 9-city average price near the mid-50's.

Estimated 4th quarter 1981 broiler price/consumption relationships[1]

Domestic civilian per capita consumption		Estimated 9-city whole-sale broiler price
Pounds	Percent change from year earlier	
13.1	+15	44-47
12.5	+10	47-50
12.0	+5	50-53
11.4	0	[2]53-56
10.8	-5	56-59
10.3	-10	59-62
9.7	-15	62-65

[1]Based on historical relationships.

[2]The estimated 53-56 cents per pound is based on prospective conditons for competing meats and general economic activity and assumes no change from a year earlier in per capita consumption of broilers.

The price other than the base 53-56 cents per pound were estimated by assuming the same conditions for competing meats and economic activity as under the base and various changes from a year earlier in the per capita consumption of broilers.

3.96 Billion Broilers Raised in 1980

Last year, producers continued to produce broilers in record numbers—3,964 million during the 1980 marketing year (December 1-November 30), up from the 3,951 million in 1979. Production expanded in five of the 10 largest States but fell from a year earlier in the other five. Arkansas, the largest producer, decreased production by over 6 percent but still produced 16 percent of total birds grown. The hot summer may have accounted for some of the drop in some of the States. However, not all the States in the Southeast lowered production; for example, production increased in Georgia.

The ranking of the top 10 States remained unchanged from 1979. The percentage of production accounted for by these states remained the same at 83 percent of total U.S. production in both years.

USDA Purchases

Purchases of young chicken by USDA under the 1980 school lunch and other domestic food programs ended March 3, 1981; purchases in March totaled 2.2 million pounds of fresh frozen cut-up chicken and 1.5 million pounds of cooked frozen cut-up chicken. During the comparable period last year, purchases totaled 2.4 million pounds of fresh frozen cut-up chicken and 1.5 million pounds of cooked frozen cut-up chicken.

Table 13—Young chicken supply and utilization, 1979-81 1/ 2/

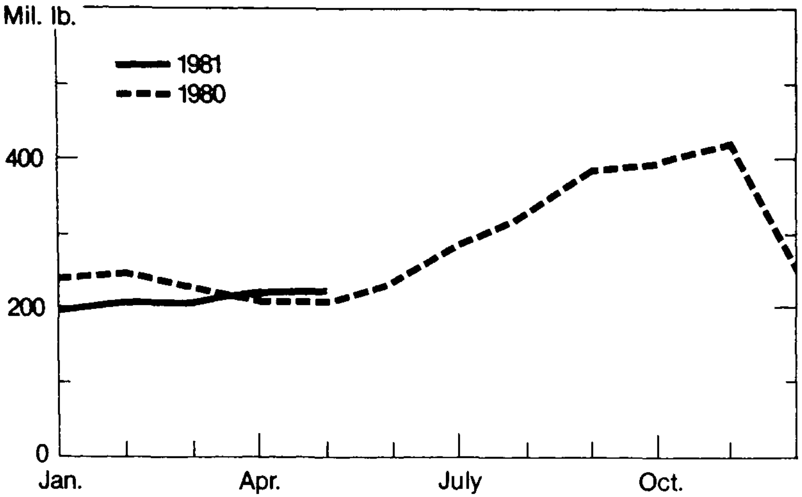
Year	Production 1/	Beginning stocks	Total supply	End stocks	Exports and shipments	Military	Civilian disappear-ance	Per capita
	Million pounds							Pounds
1979:								
January	922.3	20.1	942.4	17.9	41.1	2.1	881.2	4.05
February	770.3	17.9	788.2	17.6	35.4	2.6	732.6	3.36
March	930.4	17.6	948.0	18.4	49.3	2.4	877.8	4.03
April	915.2	18.4	933.6	17.1	35.0	2.7	873.9	4.03
May	1,040.4	17.1	1,057.5	21.6	37.1	3.4	995.5	4.56
June	966.8	21.6	988.4	19.3	42.5	2.9	923.7	4.23
July	991.4	19.3	1,010.7	23.5	42.8	2.3	942.0	4.31
August	1,055.2	23.5	1,078.7	25.6	40.2	2.5	1,010.5	4.62
September	837.3	25.6	912.9	28.7	46.0	3.1	835.1	3.81
October	1,066.9	28.7	1,095.6	32.1	59.7	2.8	1001.1	4.57
November	843.0	32.1	875.1	31.6	45.4	2.7	795.4	3.63
December	825.6	31.6	857.2	30.6	71.7	3.3	755.7	3.44
1980								
January	977.1	30.6	1007.7	27.3	37.7	2.6	940.0	4.28
February	888.5	27.3	915.8	31.1	35.5	2.6	846.7	3.85
March	920.2	31.1	951.3	31.2	65.5	2.6	852.0	3.87
April	1,001.1	31.2	1032.3	32.4	50.9	3.6	945.3	4.29
May	1,014.4	32.4	1,046.8	32.1	65.4	3.0	946.2	4.29
June	973.8	32.1	1,005.9	34.7	78.4	4.5	888.2	4.03
July	949.1	34.7	983.8	31.8	58.4	3.6	890.0	4.03
August	923.9	31.8	955.7	30.9	57.3	2.1	865.4	3.92
September	944.1	30.9	975.0	26.8	65.9	4.0	878.3	3.97
October	1,008.3	26.8	1,035.1	28.4	71.7	2.0	932.9	4.22
November	801.7	28.4	830.1	25.1	65.3	2.4	737.2	3.33
December	932.1	25.1	957.2	22.4	69.5	4.1	861.1	3.89
1981								
January	985.2	22.4	1,007.6	27.1	67.6	2.1	910.8	4.10
February	868.1	27.1	895.2	26.8	57.9	2.2	808.3	3.64
March	1,020.5	26.8	1,047.3	25.6	66.0	2.9	952.9	4.29

1/ Total monthly production is estimated by multiplying the monthly federally inspected slaughter by the ratio of the annual total production to the annual federally inspected slaughter. The ratio for 1981 is the same as the one for 1980. 2/ Totals may not add due to rounding.

Table 14—U.S. young chicken exports to major importers, January-March 1980-81

Country or area	1980	1981
	1,000 pounds	
Japan	13,075	30,470
Egypt	5,847	19,420
Venezuela	9,491	12,193
Iraq	9,411	11,563
Jamaica	8,413	11,259
Singapore	7,147	10,291
Hong Kong	9,989	9,114
Mexico	6,517	7,676
Canary Islands	5,884	6,318
Leeward-Windward Islands	3,829	5,514
Netherlands Antilles	2,574	3,115
Canada	4,339	2,834
Nicaragua	646	2,619
French Pacific Islands	1,551	1,958
Dominican Republic	2,015	1,881
Other	12,162	16,030
Total	102,950	152,310

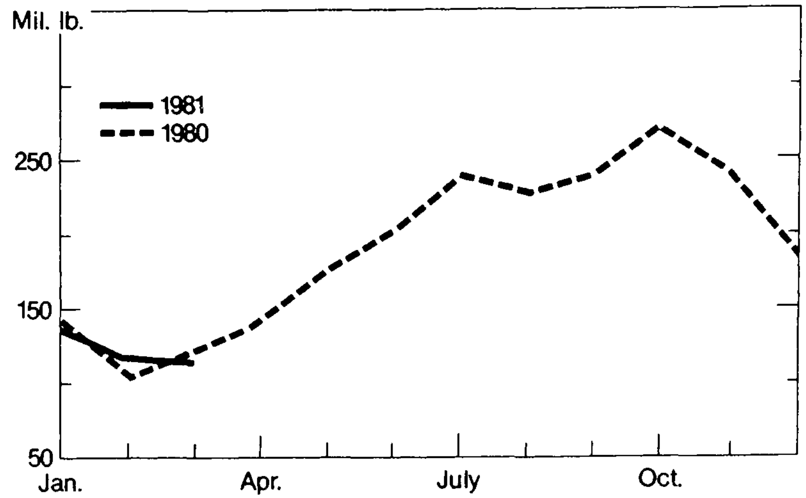
Turkey Cold Storage Stocks*



*First of month.

USDA Neg. ESS 5333-81 (5)

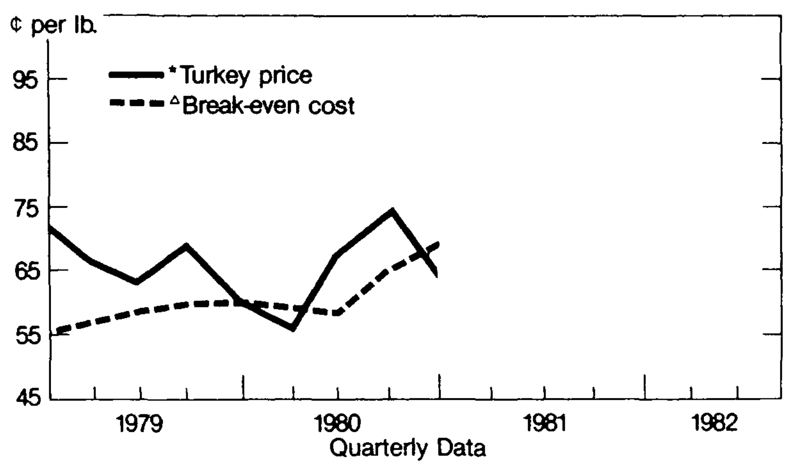
Turkey Slaughter*



*Certified ready-to-cook under Federal Inspection.

USDA Neg. ESS 844-81 (5)

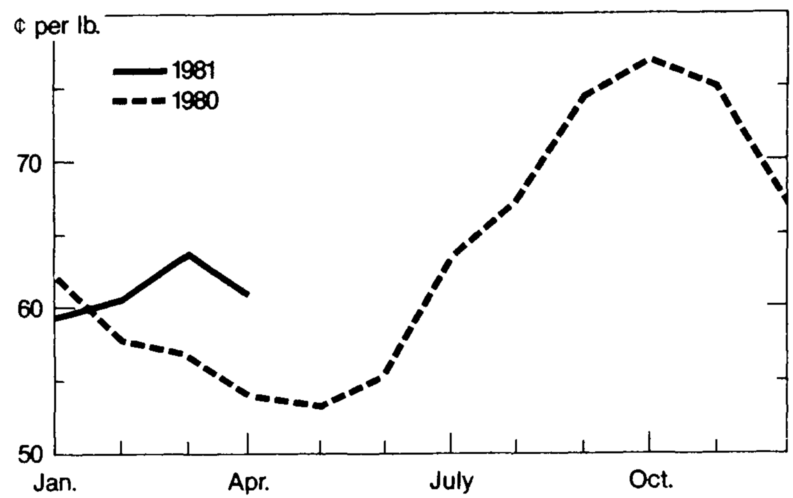
Turkeys Break-Even Cost and Market Price



*Weighted average price in New York, Chicago, and Los Angeles of 8-16 pound young hens and 24-26 pound young toms. ^Estimated U.S. break-even cost.

USDA Neg. ESS 2611-81 (5)

Turkey Prices*



*Young hens 8-16 pounds, New York.

USDA Neg. ESS 67-81 (5)

TURKEYS

Turkey meat output will increase seasonally in coming months, but the year-to-year gain will narrow substantially as heavy production months approach. Lower pork supplies will likely hold turkey prices for second-half 1981 near the relatively high levels of a year earlier.

Turkey Production to Slow

Turkey producers responded to last fall's favorable returns by increasing poult production. As a result, January-March turkey meat output in federally inspected plants was up 5 percent to a record 393 million pounds. The number of birds marketed increased 4 percent and the average weight (18.81 pounds) was up 1 percent.

Turkey output may continue above a year ago levels during the rest of this year, but the margin will be narrow in the second half. The hatch of turkey poults during last September-December, largely for marketing in early 1981, was up 8 percent from a year earlier. However, the hatch during January-February was 1 percent below a year earlier and was 3 percent below in March-April. Turkey eggs in incubators on May 1 were 2 percent above last year.

Death loss of young turkeys was 9.4 percent last year, compared with 8.8 percent in 1979 and 8.0 percent in 1978. If rate of mortality returns to normal levels, production could be larger than the percentage of poults hatched would suggest.

Reacting to negative returns early in 1980, producers moved turkeys to slaughter at lighter weights last year. If average slaughter weights continue heavier this year, turkey meat output would also be larger than hatchings suggest.

Turkey meat production during April-June is expected to be up 6 percent from 1980. Output will climb seasonally during the second half of the year, but the increase over 1980 may only be around 1 percent.

Turkey Prices to Strengthen

Wholesale turkey prices have declined in 1981 after reaching seasonal highs in the fourth quarter of last year. The usual seasonal decline following Thanksgiving and Christmas, increased turkey production, and continued large supplies of other meats pushed prices down.

Wholesale prices for 8- to 16-pound young hen turkeys in New York during January-April averaged 61 cents a pound, 3 cents above the first 4 months of 1980. After dropping significantly in January, prices strengthened slightly in March but weakened in April. In May, prices for light hens were about 63 cents, 10 cents above a year earlier. Prices are expected to strengthen in coming months and average about the same as last year. Reduced supplies of red meat, mainly pork, should strengthen turkey prices throughout the rest of 1981.

Turkey Stocks Increase

Cold storage stocks are usually worked down during the first half of the year before they are rebuilt to meet holiday demands. This year, cold storage stocks were low at the beginning of the year, and rebuilding has started earlier than usual. Cold storage stocks totaled 198 million pounds on January 1, increasing to 219 million pounds on April 1. Also, stocks rose to 230 million pounds on May 1—11 percent above a year earlier. With a jump in turkey production during April-June, cold storage stocks will continue to increase, perhaps reaching 300 million pounds by midyear. This would be the largest July 1 stocks ever.

Exports Decline Slightly

U.S. Turkey meat exports and shipments in the first quarter of 1981 declined from last year. West Germany imported the largest amount of turkey meat in the first quarter, while Egypt—which imported the most turkey meat during all of 1980—was the third largest. Nigeria, Switzerland, and Mexico were among the larger importing countries, with sharper drops in imports of turkey meat from the United States.

Exports of turkey meat through March 1981 were down 6 percent to 12 million pounds. All of the decrease was in turkey parts, down 16 percent to about 8 million pounds. Whole turkey exports were up 19 percent and accounted for 35 percent of the total.

Shipments to Puerto Rico and the Virgin Islands during January-March totaled 494 thousand pounds, down from 559 thousand a year ago.

Table 15—Turkey Hatchery Operations, United States, 1980-81

Month	Poults hatched: Light breeds[1] 1980	Light breeds[1] 1981	Heavy breeds[2] 1980	Heavy breeds[2] 1981	Total 1980	Total 1981	Eggs in incubators first of month changes from previous year: Light 1981	Heavy 1981	Total 1981
	Thousands						Percent		
January	1,479	1,253	14,327	14,348	15,806	15,601	-11	2	1
February	1,364	1,014	15,299	15,504	16,663	16,518	-26	1	-1
March	1,462	1,034	18,992	18,835	20,454	19,869	-30	-3	-5
April	1,414	1,001	19,762	19,524	21,176	20,525	-29	4	2
May	1,381		19,875		21,256				
June	1,532		18,796		20,328				
July	1,795		16,949		18,744				
August	1,475		10,700		12,175				
September	912		8,019		8,931				
October	1,312		8,734		10,046				
November	1,226		9,033		10,259				
December	1,472		11,356		12,828				

1/ Normal mature marketing weight under 12 pounds. 2/ Normal mature marketing weight 12 pounds or over.

Table 16— Turkey prices, by quarters 1979-81

Calendar quarters	Liveweight	New York, wholesale, frozen f.o.b. or equivalent: Young hens 8-16 lbs.	Young toms 14-20 lbs.	Young toms 24-26 lbs.
	Cents per pound			
1979				
I	45.2	70.2	70.0	72.3
II	41.5	65.2	62.8	66.6
III	38.0	63.1	57.8	63.9
IV	44.2	72.8	67.5	67.6
Year	42.2	68.1	64.5	67.6
1980				
I	37.0	59.0	56.3	61.2
II	32.7	54.3	51.3	57.4
III	42.0	63.3	68.4	68.5
IV	48.4	73.0	73.9	75.8
Year	40.0	63.6	62.4	65.8
1981				
I	39.7	61.3	60.6	65.1

Table 17— turkey exports to major importers, January-March 1980-81

Country or area	1980	1981
	1,000 pounds	
West Germany	4,506	2,831
Canada	1,299	1,748
Egypt	445	1,462
United Kingdom	1,263	1,230
Togo	295	739
Japan	278	549
Saudi Arabia	99	434
Argentina	192	430
Hong Kong	161	278
Netherlands	148	267
Trinidad-Tobago	121	267
Greece	44	247
Bahamas	216	234
Barbados	2	201
Venezuela	26	187
Other	3,734	945
Total	12,829	12,049

Table 18- Turkey: Supply and utilization, 1979-80 1/ 2/

Year	Production	Beginning stocks	Total supply	Ending stocks	Exports and shipments	Military	Civilian disappear-ance	Per capita
				Million pounds				Pounds
1979:								
January	106.6	175.1	281.7	170.7	3.9	.9	106.2	.49
February	82.8	170.7	253.5	164.7	2.8	1.4	84.5	.39
March	101.9	164.7	266.6	135.7	3.0	.9	126.9	.58
April	120.6	135.7	256.3	128.0	2.8	.3	125.1	.57
May	169.0	128.0	297.0	153.1	3.2	.9	139.8	.64
June	210.5	153.1	363.6	200.9	3.9	.8	158.0	.72
July	235.6	200.9	436.5	272.5	5.2	2.0	156.9	.72
August	287.7	272.5	560.2	382.5	6.1	6.0	165.6	.76
September	250.5	382.5	633.0	432.3	6.2	1.8	192.7	.88
October	319.8	432.3	752.1	445.5	9.1	1.8	295.6	1.35
November	218.4	445.5	726.9	231.2	5.3	1.7	438.7	2.00
December	177.8	231.2	459.0	240.0	5.0	.5	213.5	.97
1980:								
January	146.8	240.0	386.8	246.8	4.3	1.1	134.6	.61
February	113.7	246.8	360.5	225.0	4.4	1.2	130.0	.59
March	128.1	225.0	353.1	208.9	4.7	1.4	138.1	.63
April	147.1	208.9	356.0	206.6	4.7	.8	143.9	.65
May	184.8	206.6	391.4	233.8	6.8	1.0	149.7	.68
June	212.5	233.8	446.3	286.6	4.2	2.6	152.9	.69
July	246.0	286.6	532.6	325.8	7.5	1.8	201.4	.91
August	234.8	325.8	560.6	384.0	9.7	.7	166.2	.75
September	245.1	384.0	629.1	398.8	8.7	2.1	223.5	1.01
October	282.6	398.8	681.4	420.2	10.8	.9	249.4	1.13
November	251.7	420.2	671.9	257.6	8.0	1.0	405.4	1.83
December	195.0	257.6	452.6	198.0	7.5	1.5	245.6	1.11
1981								
January	145.7	198.0	343.7	207.9	3.2	.9	131.7	.59
February	123.3	207.9	331.2	207.9	4.5	1.2	117.7	.53
March	139.4	207.9	347.3	219.4	4.3	1.5	121.7	.55

1/Total monthly production is estimated by multiplying the monthly inspected slaughter by the ratio of the annual total production to the annual inspected slaughter. The ratio used in 1981 is the same as the one in 1980. 2/Totals may not add due to rounding

Table 19- Turkey supply and consumption, by quarters, 1978-81

Year and quarter	Federally inspected slaughter				Total production RTC 1/	Per capita consump-tion
	Number	Av. wt.	Live wt. lb.	Certified RTC wt.		
	Mil.	Lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.	Lbs.
1978						
I	15.3	18.84	289.2	227.8	240.8	1.3
II	28.1	17.96	504.3	399.6	422.1	1.7
III	45.8	18.69	856.2	697.7	719.1	2.2
IV	42.6	20.05	853.7	676.4	716.0	4.1
Year	131.8	18.99	2,503.4	1,983.5	2,098.0	9.3
1979						
I	18.3	18.84	345.5	271.5	291.3	1.5
II	32.4	17.99	583.3	465.5	500.1	1.9
III	48.8	18.53	905.4	720.0	773.9	2.4
IV	46.5	19.65	914.1	724.9	779.0	4.3
Year	146.1	18.81	2,748.3	2,181.8	2,344.3	10.1
1980						
I	25.5	18.63	474.9	373.7	388.6	1.8
II	36.9	17.83	657.8	523.1	544.4	2.0
III	49.0	18.17	890.0	705.5	733.8	2.7
IV	45.6	19.41	885.0	700.5	729.4	4.1
Year	157.0	18.52	2,907.6	2,302.8	2,396.2	10.6
1981						
I	26.6	18.81	499.6	392.7	408.5	1.7

1/Total production equals federally inspected slaughter plus other slaughter minus cut-up and further processing condemnations.

POULTRY CONSUMPTION STEADY BUT FEWER EGGS USED IN 1980

Last year's consumption of all poultry was the same as in 1979-at 61.7 pounds a person. Turkey consumption increased 0.5 pounds a person, but young chicken meat fell 0.6 pounds a person. Other chicken meat rose 0.1 pounds a person. On a retail weight basis, pork consumption per person was 8.5 pounds larger than poultry.

Total production of young chicken meat in 1980 was up 1 percent from a year earlier, rising to 11.3 billion pounds. However, increases in cold storage stocks, exports, shipments, and military purchases left less young chicken for civilian consumption.

Total production of other chicken (mostly culled from laying flocks) was up almost 4 percent to 757 million pounds in 1980. Per capita consumption was up 3 percent. Exports, cold storage stocks, and military purchases were also up, but not enough to decrease civilian consumption.

Turkey meat production was 2 percent larger than in 1979. Exports increased, but shipments, cold storage stocks, and military use were down, allowing civilian consumption to rise by 6 percent.

Per capita egg consumption reversed the trend of the past few years and fell almost 5 eggs from 1979. Total egg production was essentially unchanged from 1979, but exports increased 84 percent. The data show that shell egg use was down 4 eggs to 243 a person, while processed egg consumption, largely used in prepared foods, declined 0.4 eggs to the equivalent of 36.2 eggs a person. Although more eggs were commercially broken, exports of processed eggs increased by 78 percent to 64 million dozen (shell equivalent), thus reducing domestic use.

Per capita red meat consumption last year totaled 151.4 pounds (retail weight), up 3.8 pounds from 1979. Beef and veal use fell to 79.7 pounds down 1.5 pounds. Pork consumption increased by 5.1 pounds, rising to 70.2 pounds per capita. In total, 1980 per capita consumption of red meats (retail weight) and chicken and turkey totaled 213.1 pounds, up 3.8 pounds from 1979.

1980 Gross Income From Poultry and Eggs Increases

The total gross income from the production of eggs, broilers, other chicken, and turkeys for the 1980 marketing year (December 1-November 30) totaled $8.98 billion, up 2 percent from the previous year. All of the increase in gross income was from broilers and turkeys. However, income was down from 1979 for both eggs and chickens other than broilers.

Gross income from broilers rose nearly 7 percent from 1979, reaching $4 billion and accounting for 48 percent of the combined total for poultry and eggs. A 6.7-percent jump in the liveweight equivalent price and a 0.1-percent rise in production caused the increase.

Larger turkey production pushed income from turkeys up 4 percent to $1 billion. Production expanded 4 percent and prices rose 0.2 cent a pound from 1979.

With larger production in 1980, income from eggs fell nearly 3 percent to $3 billion, accounting for 36 percent of the total gross income for poultry and eggs. Egg production was up nearly 1 percent, but prices averaged slightly over 3 percent below 1979.

FEWER CHICKEN AND TURKEY HATCHERIES

The number of chicken and turkey hatcheries continued to decline during 1979-1980. At the same time, the egg capacities increased for turkey hatcheries but declined for chicken hatcheries.

On January 1, 1981, there were 538 chicken hatcheries, with a capacity of 466 million eggs, compared with 618 units and 460 million eggs 2 years earlier. Of total hatcheries, 49 percent had egg capacities of 500,000 or more, up from 43 percent on January 1, 1979, and accounting for 90 percent of total chicken hatchery capacity. This compares with 88 percent in 1979.

The number of turkey hatcheries on January 1, totaled 109, with a total capacity of about 39 million eggs. This compares with 126 hatcheries with an egg capacity of about 37 million 2 years ago. Hatcheries with capacities of 100,000 to 499,999 eggs represented 48 percent of the total number and accounted for 36 percent of the total turkey egg capacity. Although only 24 percent of the hatcheries had a capacity of 500,000 or more eggs, they accounted for 60 percent of the total capacity. Only the 100,000-to-499,999 size group decreased egg capacity. Twenty-eight percent of the hatcheries had a capacity under 100,000, but these only rose slightly more than 3 percent from 1979.

Table 20--Gross farm income from poultry and eggs, 1970-80 1/

Year	Value of sales and consumption on farms where produced								
	Eggs				Nonbroiler chicken		Total 2/		
	Sales	consumption on farms	Broilers	Turkeys	Sales	consumption on farms	Sales	consumption on farms	Gross income
	Million dollars								
1970	2,190	30	1,475	493	102	6	4,265	37	4,302
1971	1,801	20	1,487	500	99	5	3,881	25	3,906
1972	1,764	17	1,623	537	101	5	4,024	22	4,046
1973	2,859	27	2,690	936	169	8	6,655	34	6,689
1974	2,884	25	2,436	638	116	5	6,120	30	6,151
1975	2,797	22	2,915	793	104	5	6,609	28	6,637
1976	3,110	24	2,953	825	135	6	7,024	30	7,053
1977	2,973	21	3,037	910	130	6	7,030	27	7,107
1978	2,900	19	3,632	1,157	129	5	7,868	25	7,892
1979	3,339	21	4,031	1,226	164	6	8,759	27	8,787
1980 3/	3,248	20	4,304	1,253	130	5	8,934	25	8,959

[1]Beginning in 1970 data (except turkey) correspond to a December-November marketing year. Detail may not add due to rounding. [2]Minus other poultry which is minuscule. [3]Preliminary

Table 21--Chicken and Turkey: Production, disposition and price, 1970-80

Year	Broilers[1]			Nonbroiler chicken[1]					Turkey		
	Produced[2]		Price per	Sales		Consumed on farms		Price per	Sales[2]		Price per
	Number	Pounds	Pound[4]	Number	Pounds	Number	Pounds	Pound[4]	Number	Pounds	Pound
	Million		Cents	Million				Cents	Million		Cents
1970	2,987	10,819	13.6	233	1,121	19	73	9.1	116	2,198	22.6
1971	2,945	10,818	13.8	252	1,193	18	68	7.8	120	2,256	22.1
1972	3,075	11,480	14.1	235	1,129	16	62	8.9	129	2,424	22.2
1973	3,009	11,220	24.0	232	1,122	15	56	15.1	132	2,452	38.2
1974	2,993	11,320	21.5	252	1,203	14	55	9.7	132	2,437	28.0
1975	2,950	11,096	26.3	224	1,047	13	51	9.9	124	2,277	34.8
1976	3,283	12,517	23.6	217	1,047	13	49	12.9	140	2,605	31.7
1977	3,400	12,993	23.6	224	1,077	12	47	12.0	136	2,562	35.5
1978	3,613	14,022	26.3	217	1,037	11	44	12.4	139	2,653	43.6
1979	3,951	15,519	26.0	233	1,135	11	43	14.4	156	2,958	41.4
1980 3/	3,964	15,541	27.7	238	1,183	11	43	11.0	165	3,032	41.3

[1]Beginning 1970 broiler and nonbroiler data reported as consumption which is less than 1 percent of total production. December-November marketing year. [2]Includes home. [3]Preliminary. [4]Marketing year average.

Table 22—Eggs: Production, disposition and value, 1970-80[1] [2]

Year	Average number of layers on hand during the year	Eggs: Per layer on hand during year	Eggs: Total	Eggs: Consumed on farms where produced	Eggs: Sold	Eggs: Price per dozen	Eggs: Gross income
	Million	Number		Million		Cents	Million dollars
1970	313	218	68,212	953	67,259	39.1	2,221
1971	313	223	69,649	789	68,860	31.4	1,821
1972	305	227	69,219	692	68,527	30.9	1,781
1973	291	227	66,039	627	65,412	52.5	2,886
1974	285	230	65,620	580	65,040	53.2	2,910
1975	278	232	64,626	536	64,090	52.4	2,819
1976	274	235	64,511	502	64,009	58.3	3,133
1977	275	235	64,600	475	64,125	55.6	2,995
1978	281	239	67,140	457	66,683	52.2	2,920
1979	289	240	69,209	448	68,761	58.3	3,360
1980[3]	288	244	69,683	442	69,242	56.3	3,268

[1]Data cover both farm and commercial opertions. [2]December 1 previous year-November 30 following year.

[3]Preliminary.

Table 23—Hatcheries: Number, capacity and utilization, avaliable data, 1953-81[1]

Year	Chicken hatcheries[1]: Number	Chicken hatcheries: Egg capacity on January 1: Total	Chicken hatcheries: Egg capacity on January 1: Per hatchery	Chicks hatched in year ending June 30: Total	Chicks hatched in year ending June 30: Per unit of hatchery capacity	Turkey hatcheries: Number	Turkey hatcheries: Eggs capacity on January 1: Total	Turkey hatcheries: Eggs capacity on January 1: Per hatchery	Poults hatched in year ending June 30: Total	Poults hatched in year ending June 30: Per unit of hatchery capacity
		Thousands	Thousands	Thousands	Number		Thousands	Thousands	Thousands	Number
1953	6,890	562,237	81.6	1,736,134	3.09	1,343	54,739	40.8	--	--
1957	5,045	528,563	104.8	2,040,936	3.86	1,007	52,751	52.4	89,218	1.69
1959	4,257	530,057	124.5	2,444,441	4.61	682	45,544	66.8	91,314	2.00
1961	3,525	509,086	144.4	2,599,137	5.11	621	49,730	80.1	117,331	2.36
1963	2,911	494,446	169.9	2,723,585	5.51	551	54,237	98.4	101,791	1.88
1965	2,365	471,318	199.3	2,865,113	6.08	453	51,085	112.8	112,144	2.20
1967	1,932	468,143	242.3	3,341,540	7.14	407	56,983	140.0	137,849	2.42
1969	1,486	453,669	305.3	3,409,928	7.52	303	53,763	177.4	115,328	2.15
1971	1,209	445,336	368.4	3,665,456	8.23	252	49,263	195.5	127,263	2.58
1973	989	436,286	441.1	3,705,743	8.49	203	44,649	219.9	140,464	3.15
1975	797	416,040	522.0	2/3,829,095	9.20	180	41,851	232.5	129,968	3.11
1977	651	420,070	645.3	4,072,157	9.69	149	40,375	271.0	147,092	3.64
1979	698	469,032	759.0	4,577,549	9.76	126	36,711	291.4	167,955	4.58
1981	538	466,096	866.3	3,509,009	7.53	109	39,022	358.0	124,971	3.20

[1]Includes Hawaii beginning in 1961. [2]For year ending February 28.

Table 24--Per capita consumption of shell eggs and total eggs, by quarters, 1960-80

Item and Year	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total
			Number		
			Shell eggs		
1960	76.1	70.8	69.9	74.3	291.1
1961	73.2	69.6	70.2	74.7	287.7
1962	74.8	70.3	69.5	74.6	289.2
1963	73.0	69.6	70.0	73.6	286.2
1964	73.9	69.3	70.2	73.5	286.9
1965	71.9	70.2	69.8	72.5	284.4
1966	71.1	68.7	69.3	73.3	282.4
1967	71.7	69.2	70.7	74.1	285.7
1968	73.7	69.8	69.1	71.2	283.8
1969	71.0	69.0	69.1	70.2	279.3
1970	69.1	67.5	68.2	71.4	276.2
1971	70.0	68.3	67.2	69.6	275.1
1972	70.2	65.9	65.7	66.8	268.6
1973	66.3	65.1	62.7	65.4	259.5
1974	64.3	62.1	61.7	64.2	252.3
1975	63.7	60.5	60.8	63.4	248.4
1976	61.8	59.3	59.0	60.3	240.6
1977	59.0	56.6	57.2	62.3	235.2
1978	60.4	58.5	60.0	63.4	242.3
1979	62.0	60.5	61.0	63.5	247.1
1980 1/	62.2	59.2	59.4	61.9	242.7
			Total eggs[1]		
1960	84.1	79.3	77.1	80.0	320.5
1961	80.8	79.6	76.9	80.8	318.1
1962	81.8	80.4	76.8	80.5	319.5
1963	78.9	78.8	76.8	79.3	313.8
1964	80.8	79.4	77.3	80.3	317.8
1965	79.7	78.8	76.3	78.3	313.1
1966	77.7	77.9	76.1	80.6	312.3
1967	80.3	79.4	79.3	81.7	320.7
1968	81.6	78.8	77.1	78.0	315.5
1969	77.3	78.2	77.1	77.7	310.3
1970	76.4	76.9	76.7	79.4	309.4
1971	78.4	77.5	76.5	79.3	311.7
1972	79.2	75.9	75.0	74.3	304.4
1973	73.8	73.7	70.7	73.2	291.4
1974	72.3	71.4	70.6	71.9	286.2
1975	69.3	69.9	69.5	70.9	279.6
1976	69.2	67.8	67.8	68.8	273.8
1977	67.0	66.7	66.9	71.2	272.0
1978	68.2	68.1	69.3	71.8	277.5
1979	70.1	69.9	70.8	72.6	283.5
1980 2/	70.8	68.1	68.8	70.8	278.7

1/ Shell eggs and shell equivalent of all eggs. 2/ Preliminary.

Table 25—Supply and utilization: Young chicken, other chickens, and turkeys, 1970-80[1]/

Year	Production	Beginning stocks	Total supply	End stocks	Exports and shipments	Military	Civilian disappear-ance	Per capita
				Million pounds				Pounds
				Young chicken				
1970	7,687	34	7,721	52	178	58	7,433	36.9
1971	7,724	52	7,776	40	197	56	7,483	36.7
1972	8,147	40	8,187	29	198	40	7,920	38.4
1973	8,025	29	8,054	33	193	38	7,790	37.4
1974	8,126	33	8,159	37	222	32	7,868	37.5
1975	8,127	37	8,164	22	254	35	7,853	37.2
1976	9,067	22	9,089	33	414	32	8,610	40.4
1977	9,418	33	9,451	29	442	22	8,958	41.7
1978	10,129	29	10,158	20	458	29	9,651	44.5
1979	11,219	20	11,239	31	546	33	10,629	48.6
1980 2/	11,334	31	11,365	22	721	37	10,585	48.0
				Other chicken				
1970	778	76	854	111	4	11	728	3.6
1971	792	111	903	109	5	19	770	3.8
1972	740	109	849	82	8	12	747	3.6
1973	736	82	818	113	10	9	686	3.3
1974	789	113	902	138	13	2	749	3.6
1975	696	138	834	92	19	4	719	3.4
1976	684	92	776	122	37	1	616	2.9
1977	700	122	822	109	40	4	669	3.1
1978	665	109	774	82	43	3	641	3.0
1979	731	82	813	112	51	(3)	650	3.0
1980 2/	757	112	869	114	60	1	694	3.1
				Turkey				
1970	1,729	192	1,921	219	43	49	1,610	8.0
1971	1,772	219	1,991	223	27	41	1,700	8.3
1972	1,909	223	2,132	208	42	42	1,840	8.9
1973	1,933	208	2,141	281	54	31	1,775	8.5
1974	1,921	281	2,202	275	43	14	1,870	8.9
1975	1,803	275	2,078	195	53	19	1,811	8.6
1976	2,059	195	2,254	203	71	18	1,962	9.2
1977	2,023	203	2,226	168	56	11	1,991	9.3
1978	2,098	168	2,266	175	57	15	2,019	9.3
1979	2,344	175	2,520	240	57	19	2,204	10.1
1980 2/	2,396	240	2,636	198	81	16	2,341	10.6

[1]Ready-to-cook weight. [2]Preliminary. [3]Less than 500,000 lbs.

Table 26 – Per capita consumption of chicken and turkey by quarters, 1970-80

Item and year	First quarter	Second quarter	Third quarter	Fourth quarter	Total[1]
			Pounds		
Young chickens:					
1970	8.7	9.8	9.7	8.7	36.9
1971	8.7	9.3	9.7	9.0	36.7
1972	9.2	10.1	9.9	9.2	38.4
1973	8.9	9.6	9.5	9.4	37.4
1974	9.3	10.0	9.7	8.5	37.5
1975	8.6	9.6	9.7	9.3	37.2
1976	9.7	10.4	10.6	9.7	40.4
1977	9.8	10.8	10.9	10.2	41.7
1978	10.5	11.6	11.5	10.9	44.5
1979	11.4	12.8	12.7	11.6	48.6
1980 1/	12.0	12.6	11.9	11.4	48.0
Other chicken:					
1970	.9	.9	.8	1.0	3.6
1971	1.1	.9	.8	1.0	3.8
1972	1.1	.9	.7	.9	3.6
1973	1.0	.9	.7	.7	3.3
1974	1.0	.9	.8	.9	3.6
1975	1.0	.8	.8	.8	3.4
1976	.9	.7	.6	.7	2.9
1977	.9	.8	.6	.8	3.1
1978	.9	.8	.6	.7	3.0
1979	.8	.7	.7	.8	3.0
1980 1/	1.0	.8	.6	.7	3.1
Turkey:					
1970	.9	.9	2.1	4.1	8.0
1971	1.0	1.2	2.0	4.1	8.3
1972	1.1	1.3	2.1	4.4	8.9
1973	1.2	1.3	2.1	3.9	8.5
1974	1.2	1.6	2.0	4.1	8.9
1975	1.1	1.4	2.0	4.1	8.6
1976	1.2	1.5	2.1	4.4	9.2
1977	1.3	1.5	2.3	4.2	9.3
1978	1.3	1.7	2.2	4.1	9.3
1979	1.5	1.9	2.4	4.3	10.1
1980 1/	1.8	2.0	2.7	4.1	10.6
Total:					
1970	10.5	11.6	12.6	13.8	48.5
1971	10.8	11.4	12.5	14.1	48.8
1972	11.4	12.3	12.7	14.5	50.9
1973	11.1	11.8	12.3	14.0	49.2
1974	11.5	12.5	12.5	13.5	50.0
1975	10.7	11.8	12.5	14.2	49.2
1976	11.8	12.6	13.3	14.8	52.5
1977	12.0	13.1	13.8	15.2	54.1
1978	12.7	14.1	14.3	15.7	56.8
1979	13.7	15.4	15.8	16.7	61.7
1980 1/	14.8	15.4	15.2	16.2	61.7

1/ Preliminary.

Table 27—Per capita consumption (retail weight) of red meat by quarters, 1971-80 1/

Item and Year	First quarter	Second quarter	Third quarter	Fourth quarter	Total[1]
	Pounds	Pounds	Pounds	Pounds	Pounds
Beef and Veal:					
1971	21.1	21.3	22.2	21.2	85.8
1972	21.4	21.8	22.1	22.4	87.7
1973	21.2	19.7	20.1	21.6	82.6
1974	21.3	21.6	22.3	23.1	88.3
1975	23.2	21.8	23.4	24.1	92.5
1976	25.2	23.8	25.6	24.4	99.0
1977	24.3	23.6	24.5	24.0	96.4
1978	23.2	22.7	22.6	22.9	91.4
1979	21.3	19.8	19.8	20.3	81.2
1980 2/	19.6	19.6	20.0	20.5	79.7
Pork:					
1971	17.1	16.6	16.8	17.7	68.2
1972	16.6	15.5	14.7	16.1	62.9
1973	14.9	14.5	13.1	15.1	57.6
1974	15.7	16.0	15.0	15.5	62.2
1975	14.0	13.2	11.5	12.5	51.2
1976	13.1	12.4	13.3	15.8	54.6
1977	14.5	13.7	13.5	15.0	56.7
1978	14.1	13.9	13.9	15.0	56.9
1979	14.8	15.9	16.4	18.1	65.2
1980 2/	17.7	18.1	16.8	17.6	70.2
Lamb and Mutton:					
1971	0.7	0.7	0.7	0.7	2.8
1972	0.7	0.8	0.8	0.6	2.9
1973	0.7	0.6	0.6	0.5	2.4
1974	0.5	0.5	0.5	0.5	2.0
1975	0.5	0.4	0.4	0.5	1.8
1976	0.5	0.4	0.4	0.4	1.7
1977	0.4	0.4	0.4	0.3	1.6
1978	0.4	0.4	0.3	0.3	1.4
1979	0.3	0.4	0.3	0.3	1.3
1980 2/	0.4	0.4	0.3	0.4	1.5
All red Meat:					
1971	38.9	38.6	39.7	39.6	156.8
1972	38.7	38.1	37.6	39.1	153.5
1973	36.8	34.8	33.8	37.2	142.6
1974	37.5	38.1	37.8	39.1	152.5
1975	37.7	35.4	35.3	37.1	145.5
1976	38.8	36.6	39.3	40.6	155.3
1977	39.2	37.7	38.4	39.3	154.6
1978	37.7	37.0	36.8	38.2	149.7
1979	36.4	36.1	36.4	38.7	147.6
1980	37.7	38.1	37.1	38.5	151.4

1/ Detail may not add exactly to total due to rounding. 2/ Preliminary.

Table 28—Total eggs: Supply and utilization, 1960-80[1]

Year	Supply				Utilization					
							Domestic disappearance			
	Production	Imports[2]	Beginning stocks	Total supply	Ending stocks	Exports and shipments	Eggs used for hatching	Military	Civilian	
									Total	Per capita
	Million dozen									Number
1960	5,134	2	65	5,201	51	42	287	63	4,758	320.5
1961	5,202	2	51	5,255	48	40	302	64	4,801	318.1
1962	5,297	1	48	5,346	50	32	305	70	4,889	319.5
1963	5,292	1	50	5,343	44	42	313	67	4,877	313.8
1964	5,435	2	44	5,481	45	31	320	76	5,008	317.8
1965	5,463	(3)	46	5,509	41	39	336	93	5,000	313.1
1966	5,517	14	41	5,572	28	43	365	102	5,034	312.3
1967	5,777	4	28	5,809	71	55	358	110	5,215	320.7
1968	5,680	5	71	5,756	56	46	361	108	5,185	315.5
1969	5,629	9	56	5,694	34	41	339	83	5,147	310.3
1970	5,704	27	34	5,765	39	45	402	78	5,201	309.4
1971	5,806	10	39	5,855	58	44	389	60	5,304	311.7
1972	5,742	1	58	5,801	53	56	391	64	5,237	304.4
1973	5,502	13	53	5,568	34	49	392	42	5,051	291.4
1974	5,461	13	34	5,508	42	57	366	38	5,005	286.2
1975	5,382	5	42	5,429	28	62	372	43	4,924	279.6
1976	5,377	3	28	5,408	21	65	419	45	4,857	273.8
1977	5,408	14	21	5,443	24	91	427	36	4,865	272.0
1978	5,608	11	24	5,643	20	120	466	28	5,009	277.5
1979	5,777	10	20	5,807	19	104	498	25	5,162	283.5
1980[4]	5,806	5	19	5,830	19	167	499	24	5,121	278.7

[1] Calendar years. [2] Shell eggs and the approximate shell-egg equivalent of egg products. [3] Less than 500,000 dozen.

[4] Preliminary.

Table 29—Estimated costs and returns for market eggs[1]

Calendar quarters	Production costs all eggs: Feed[2]	Production costs all eggs: Total[2]	Wholesale cartoned Grade A large eggs: Total costs[2 3]	Wholesale cartoned Grade A large eggs: 14 metro areas price[2]	Net returns[2 3]
	Cents per dozen				
Annual average[2]					
1972	17.3	28.9	43.3	40.5	-2.8
1973	29.2	41.7	58.1	64.3	6.2
1974	31.0	45.4	63.5	63.0	-0.4
1975	29.0	43.5	61.8	62.9	1.0
1976[4]	28.5	41.5	59.9	69.9	10.0
1977[4]	27.4	40.9	59.9	63.8	3.9
1978[4]	27.2	41.3	60.5	62.2	1.7
1979	30.0	45.1	65.6	68.8	3.2
1980[5]	32.8	49.1	70.4	66.9	-3.5
1976[4]					
I	26.7	39.7	58.1	67.7	9.6
II	27.7	40.7	59.1	62.5	3.4
III	31.3	44.3	62.7	71.2	8.5
IV	28.3	41.3	59.7	77.9	18.2
1977[4]					
I	29.6	43.1	62.1	74.4	12.4
II	31.7	45.2	64.2	58.9	-5.2
III	25.4	38.9	57.9	62.7	4.8
IV	23.4	36.9	55.9	59.4	3.5
1978[4]					
I	25.9	40.0	59.2	62.0	2.8
II	28.8	42.9	62.1	55.0	-7.1
III	27.4	41.5	60.7	63.4	2.7
IV	26.8	40.9	60.1	68.2	8.1
1979					
I	27.9	43.0	63.5	73.0	9.5
II	29.6	44.7	65.2	67.2	2.0
III	32.3	47.4	67.9	65.4	-2.4
IV	30.3	45.4	65.9	69.5	3.6
1980[5]					
I	30.2	46.5	67.8	64.2	-3.6
II	29.5	45.8	67.1	58.6	-8.5
III	33.1	49.4	70.7	68.1	-2.6
IV	38.2	54.5	75.8	76.3	0.5
1981[5]					
I	37.7	54.0	75.3	72.7	-2.6

[1]Estimated by computerized formula. [2]Weighted by monthly egg production less estimated eggs used for hatching. [3]Based on farm cost converted to wholesale market value for Grade A large eggs. [4]1976-78 cost and net return estimates have been revised to changes in the method of calculation. [5]Preliminary.

Table 30—Estimated costs and returns for broilers[1]

Calendar quarters	Production costs liveweight		Wholesale: ready-to-cook		
	Feed[2]	Total[2]	Total costs[2,3]	9-city weighted average price[2]	Net returns[2,3]
			Cents per pound		
Annual average[2]					
1972	9.0	14.3	28.2	28.2	-0.1
1973	16.4	22.2	39.8	42.4	2.6
1974	15.8	22.0	40.1	38.0	-2.0
1975	15.1	21.3	39.4	45.2	5.8
1976[4]	14.9	21.1	39.4	40.2	0.9
1977[4]	15.4	21.7	40.5	40.9	0.4
1978[4]	15.0	21.5	40.2	44.6	4.4
1979	16.8	24.6	45.4	44.3	-1.1
1980[5]	17.7	26.1	48.3	46.8	-1.5
1976[4]					
I	13.5	19.7	37.5	42.1	4.7
II	13.9	20.1	38.0	41.7	3.7
III	16.4	22.6	41.4	41.5	0.1
IV	15.7	21.9	40.5	35.5	-5.0
1977[4]					
I	15.7	22.0	40.8	40.9	0.1
II	17.6	23.9	43.5	42.4	-1.1
III	16.0	22.3	41.3	42.3	1.0
IV	12.1	18.4	36.0	37.6	1.6
1978[4]					
I	14.2	20.8	39.1	41.8	2.6
II	15.2	21.8	40.6	47.7	7.1
III	15.7	22.3	41.2	46.5	5.3
IV	14.7	21.2	39.8	42.1	2.3
1979					
I	15.6	23.4	43.7	47.4	3.7
II	16.4	24.3	44.9	47.7	2.9
III	17.9	25.7	46.8	40.8	-6.0
IV	17.3	25.1	45.9	41.3	-4.6
1980[5]					
I	16.8	25.2	47.1	43.0	-4.1
II	16.2	24.6	46.3	41.1	-5.2
III	17.1	25.5	47.4	53.3	5.9
IV	20.7	29.1	52.3	50.0	-2.4
1981[5]					
I	21.3	29.7	53.1	49.3	-3.8

[1] Estimated by computerized formula. [2] Weighted by monthly broiler slaughter. 3 Based on farm cost converted to wholesale market values for ready-to-cook broilers. [4] 1976-78 cost and net return estimates have been revised due to changes in the method of calculation. [5] Preliminary.

Table 31—Estimated costs and returns for turkeys[1]

Calendar quarters	Production costs liveweight		Wholesale ready-to-cook		Net returns[2,3]
	Feed[2]	Total[2]	Total costs[2,3]	3-city composits price[2,4]	
			Cents per pound		
Annual average[2]					
1972	13.5	20.5	34.1	35.8	1.7
1973	25.6	33.1	50.6	64.2	13.6
1974	22.5	30.7	48.8	45.6	-3.2
1975	22.1	30.7	49.4	55.1	5.8
1976[5]	22.4	31.4	50.9	51.0	0.1
1977[5]	22.6	31.6	51.4	56.2	4.9
1978	22.1	31.7	51.7	68.8	17.2
1979	25.3	35.8	58.2	67.0	8.7
1980[6]	26.1	37.1	61.0	66.0	5.0
1976[5]					
I	20.1	29.1	48.0	50.9	2.9
II	20.5	29.5	48.4	52.9	4.5
III	22.6	31.6	51.1	50.8	-0.2
IV	24.1	33.1	53.0	50.2	-2.7
1977[5]					
I	22.2	31.2	50.8	52.9	2.1
II	24.5	33.5	53.6	54.4	0.8
III	25.6	34.6	55.1	54.9	-0.2
IV	18.7	27.7	46.4	59.8	13.4
1978[5]					
I	19.9	29.4	48.8	61.5	12.7
II	21.9	31.5	51.4	64.5	13.0
III	23.5	33.0	53.3	68.7	15.4
IV	21.7	31.2	51.1	74.0	22.9
1979					
I	22.9	33.4	55.3	71.6	16.3
II	24.1	34.6	56.7	66.4	9.7
III	25.7	36.2	58.7	63.4	4.7
IV	26.5	37.0	59.8	69.0	9.3
1980[6]					
I	25.5	36.5	60.2	60.2	0
II	24.7	35.7	59.3	55.8	-3.5
III	24.4	35.4	58.8	67.9	9.1
IV	29.3	40.3	65.0	74.8	9.8
1981[6]					
I	32.0	43.0	68.3	64.1	-4.2

1 Estimated by computerized formula. 2 Weighted by monthly turkey slaughter. 3 Based on farm cost converted to wholesale market values for heavy turkeys. 4 Weighted average of 8-16 pound young hens and 24-26 pound young toms in New York, Chicago, and Los Angeles. 5 1967-78 cost and net return estimates have been revised due to changes in the method of calculation. 6 Preliminary.

Table 32 - Commercial broilers: Number produced, by States and regions, by years, 1973-80 1/

State and region	Commercial broilers produced[1]							
	1973	1974	1975	1976	1977	1978	1979	1980
	Thousands							
Maine	75,642	77,426	81,035	86,659	86,936	87,695	87,616	71,696
New Hampshire								
Vermont								
Massachusetts								
Rhode Island								
Connecticut	2,730	1,836	1,039	1,041	1,033	0		
New York	1,650	1,580	1,450	700	0			
New Jersey	625	0	0					
Pennsylvania	61,263	63,649	65,770	75,108	88,140	99,300	109,266	111,553
North Atlantic	141,910	144,491	149,294	163,508	176,161	187,195	197,022	183,249
Ohio	14,000	11,900	16,666	17,499	19,400	20,400	19,100	14,550
Indiana	13,583	11,679	12,295	13,905	13,624	14,409	15,765	16,142
Illinois								
Michigan	557	577	510	755	910	1,190	2,570	1,552
Wisconsin	14,795	11,274	11,067	12,285	10,907	11,190	11,750	11,390
East North Central	42,935	35,430	40,538	44,445	44,841	47,189	49,205	43,634
Minnesota	11,149	10,815	10,092	15,200	14,200	15,100	17,000	19,400
Iowa	3,869	3,615	3,253	3,835	3,494	3,425	3,000	3,000
Missouri	21,533	19,796	23,369	25,256	24,054	22,164	25,297	23,561
North Dakota								
South Dakota								
Nebraska	2,267	2,312	1,720	1,820	1,680	1,530	1,950	2,000
Kansas	703	780	627					
West North Central	39,541	37,316	39,058	46,111	43,428	42,219	47,247	47,961
Delaware	140,967	146,945	136,278	160,046	156,081	166,986	175,856	165,729
Maryland	190,673	189,709	179,769	199,006	198,539	220,832	244,763	236,920
Virginia	77,168	77,220	77,751	86,921	98,024	91,562	111,564	126,358
West Virginia	17,301	18,293	15,798	15,129	15,256	16,197	18,743	21,786
North Carolina	290,448	286,558	283,986	315,589	339,271	353,480	376,580	399,592
South Carolina	28,653	31,532	27,405	33,404	34,481	39,045	43,667	43,124
Georgia	412,986	426,857	416,599	451,531	485,879	531,889	561,268	573,899
Florida	56,833	59,727	64,347	74,307	75,727	74,999	78,683	87,143
South Atlantic	1,215,229	1,236,861	1,201,933	1,337,935	1,404,228	1,495,040	1,611,155	1,655,551
Kentucky	7,239	6,835	5,870	6,716	3,000	3,200	3,235	3,195
Tennessee	52,342	42,586	32,000	38,310	48,864	48,177	57,733	66,929
Alabama	399,324	396,303	395,769	430,225	426,099	441,699	493,060	494,709
Mississippi	239,130	227,220	231,301	257,442	255,846	269,373	276,858	275,978
Arkansas	501,645	432,875	431,886	540,426	569,558	612,102	678,208	634,877
Louisiana	55,509	54,443	50,662	57,578	63,034	75,736	91,311	98,957
Oklahoma	23,650	29,560	26,770	31,425	29,294	35,338	40,235	45,014
Texas	173,330	173,588	166,169	190,703	185,322	198,353	228,400	221,081
South Central	1,452,369	1,415,460	1,392,427	1,552,827	1,564,237	1,683,978	1,869,140	1,840,740
Montana								
Idaho								
Wyoming								
Colorado								
New Mexico								
Arizona								
Utah								
Nevada								
Washington	17,575	16,730	15,235	15,876	16,846	17,345	19,847	20,641
Oregon	14,000	14,253	14,000	15,150	15,600	15,500	17,300	17,100
California	83,193	90,377	95,825	104,950	112,500	122,400	137,600	152,400
West	114,768	121,360	125,060	135,976	144,946	155,245	174,747	190,141
Alaska								
Hawaii	1,915	1,900	1,789	2,039	2,158	2,281	2,246	2,576
United States[2]	3,008,667	2,992,820	2,950,099	3,282,841	3,399,999	3,613,147	3,950,762	3,963,852

[1] Includes production of other meat-type breeds. December 1 through November 30 marketing year. [2] Excludes states producing less than 500,000 birds.

Table 33-Turkeys: Number raised, by states, by regions and for the United States, 1973-80 1/

State and region	All breeds							
	1973	1974	1975	1976	1977	1978	1979	1980
	1,000 head							
Maine	7	7	6	4	4	6		
New Hampshire	25	28	21	26	25	23	25	24
Vermont	14	12	7	7	8	13		
Massachusetts	173	172	125	143	125	146	140	126
Rhode Island	10	11	9	10	10	10		
Connecticut	69	51	36	33	33	41	46	25
New York	184	182	155	150	138	155	227	258
New Jersey	75	84	74	81	58	58	59	69
Pennsylvania	2,832	2,951	2,838	3,695	3,567	3,450	4,740	5,510
North Atlantic	3,389	3,498	3,271	4,149	3,968	3,902	5,237	5,964
Ohio	3,186	3,459	2,835	2,760	2,450	2,565	2,350	2,320
Indiana	5,440	6,412	5,043	5,188	4,186	4,655	5,640	6,192
Illinois	593	520	445	441	638	434	516	474
Michigan	1,088	971	700	1,170	1,210	1,210	1,200	1,450
Wisconsin	4,229	4,622	4,894	5,078	5,544	5,706	5,645	5,045
East North Central	14,536	15,984	13,917	14,637	14,028	14,570	15,351	15,481
Minnesota	23,323	21,934	22,752	24,370	22,739	21,238	24,666	25,500
Iowa	7,506	6,734	6,260	6,512	6,009	6,259	6,160	6,625
Missouri	10,295	9,497	8,125	9,725	9,846	10,500	10,950	12,400
North Dakota	1,034	692	808	960	798	950	950	955
South Dakota	1,156	895	860	1,005	1,112	979	1,253	1,277
Nebraska	858	600	500	473	471	490	654	789
Kansas	210	165	154	108	113	129	184	132
West North Central	44,382	40,517	39,459	43,153	41,088	40,545	44,817	47,678
Delaware							348	326
Maryland	68	65	72	90	91	91	118	86
Virginia	5,210	6,010	5,972	7,297	8,694	8,546	9,174	10,079
West Virginia	1,380	1,630	1,530	1,793	2,065	2,105	2,633	2,282
North Carolina	13,078	14,944	14,400	16,700	16,500	18,854	23,100	23,750
South Carolina	2,300	2,570	2,585	2,618	2,410	2,527	2,998	3,702
Georgia	1,936	1,712	1,216	1,853	1,633	1,799	2,516	2,380
Florida								
South Atlantic	23,972	26,931	25,775	30,351	31,393	33,922	40,887	42,605
Kentucky								
Tennessee	17	10	4	4	3	3		
Alabama	29	18	17					
Mississippi								
Arkansas	7,707	7,673	7,100	10,138	10,800	12,500	13,340	14,500
Louisiana	2	2	2	2				
Oklahoma	1,975	1,600	1,370	1,800	1,300	1,450	1,890	2,215
Texas	8,881	8,780	8,845	9,300	8,600	7,300	8,000	7,750
South Central	18,611	18,083	17,338	21,244	20,703	21,253	23,230	24,465
Montana								
Idaho								
Wyoming								
Colorado	3,553	3,501	3,620	3,695	3,500	3,580	3,835	4,130
New Mexico								
Arizona								
Utah	4,061	3,471	3,446	3,440	2,664	2,794	2,921	2,409
Nevada								
Washington	451	416	225					
Oregon	1,400	1,225	1,075	1,300	1,350	1,275	1,295	1,170
California	17,548	17,888	15,771	17,514	17,365	16,780	18,855	20,786
West	27,013	26,501	24,137	25,949	24,879	24,429	26,956	28,495
Other States 2/	328	395	268	478	300	258		
48 States	132,231	131,909	124,165	139,961	136,359	138,879	156,478	164,736
United States	132,231	131,909	124,165	139,961	136,359	138,879	156,478	164,736

1/ Does not include young turkeys lost; based on turkeys hatched September 1 of previous year through August 31, of the current year. 2/ Combined to avoid disclosing individual operations.

Table 34– Prices and Price Spreads for Large Eggs, Frying Chickens and Turkeys, by Region and 4-Region Average, 1981

	Grade A Large Egg			U.S. Grade A Fryers			U.S. Grade A Turkeys		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
	Cents per dozen			Cents per pound			Cents per pound		
Northeast Prices									
Farm price	60.0	56.8	55.1	40.5	41.2	39.1	47.4	48.6	52.0
Price to retailer	75.2	71.6	70.5	55.2	59.8	56.6	67.2	69.2	69.2
Retail price	102.4	99.5	94.1	77.9	79.8	79.9	99.1	99.1	103.2
Price Spreads									
Farm to consumer	42.4	42.7	39.0	37.4	38.6	40.8	51.7	50.5	51.2
Farm to retailer	15.2	14.8	15.4	14.7	18.6	17.5	19.8	20.6	17.2
Retail	27.2	27.9	23.6	22.7	20.0	23.3	31.9	29.9	34.0
Midwest Prices									
Farm price	57.9	53.2	52.1	38.6	39.1	37.1	47.4	48.6	52.0
Price to retailer	72.3	67.9	66.6	53.4	53.8	52.3	68.8	68.6	70.1
Retail price	91.0	88.7	83.6	70.9	73.0	72.0	99.6	100.1	100.0
Price Spreads									
Farm to consumer	33.1	35.5	31.5	32.3	33.9	34.9	52.2	51.5	48.0
Farm to retailer	14.4	14.7	14.5	14.8	14.7	15.2	21.4	20.0	18.1
Retail	18.7	20.8	17.0	17.5	19.2	19.7	30.8	31.5	29.9
Southern Prices									
Farm price	50.7	45.9	45.6	39.4	39.7	37.1	47.4	48.7	52.1
Price to retail	76.7	72.6	70.8	50.1	50.8	49.2	76.0	72.0	75.0
Retail price	90.7	90.0	85.7	73.2	72.8	73.4	96.9	97.2	95.8
Price Spreads									
Farm to consumer	40.0	44.1	40.1	33.8	33.1	36.3	49.5	48.5	43.7
Farm to retailer	26.0	26.7	25.2	10.7	11.1	12.1	28.6	23.3	22.9
Retail	14.0	17.4	14.9	23.1	22.0	24.2	20.9	25.2	20.8
rn Prices									
rn price	57.5	57.6	53.9	45.0	44.2	40.5	43.5	49.3	53.3
Retail price	77.2	79.9	75.1	65.2	66.3	65.4	72.6	71.4	71.8
Retail price	90.8	92.8	89.4	79.6	80.2	78.2	96.1	96.1	94.2
Price Spriead									
Farm to consumer	33.3	35.2	35.5	34.6	36.0	37.7	47.6	46.8	40.9
Farm to retailer	19.7	22.3	21.2	20.2	22.1	24.9	24.1	22.1	18.5
Retail	13.6	12.9	14.3	14.4	13.9	12.8	23.5	24.7	22.4
4-Region Average									
Farm price	55.5	53.4	51.7	40.9	41.1	38.5	47.7	48.8	52.3
Price to retailer	75.3	73.0	70.8	56.0	57.7	55.9	71.2	70.3	71.5
Retail price	93.7	92.8	88.2	75.4	76.5	75.9	97.9	98.1	98.3
Price Spreads									
Farm to consumer	37.2	39.4	36.5	34.5	35.4	37.4	50.2	49.3	46.0
Farm to retailer	18.8	19.6	19.1	15.1	16.6	17.4	23.5	21.5	19.2
Retail	18.4	19.8	17.4	19.4	18.8	20.0	26.7	27.8	26.8

Costs and Impacts of Proposed Restrictions on Use of Feed Additives in Poultry Rations

William L. Henson[1]

ABSTRACT: The use of feed additives, routinely used in poultry rations since the 1940's is now being questioned. Concern over the safety of using such additives has led to the proposal that their use be further restricted. Excessive use may pose human health or safety problems but restrictions may lower production efficiency and result in higher costs to consumers. This article sets forth some of these considerations and briefly summarizes the findings of a recent USDA analysis of the economic impact of restricting feed additives in the poultry industry. It reviews the basis for weighing these conflicting interests and points out how little concrete information is available with which to evaluate the impacts of restrictions.

Keywords: Production costs, feeds, feed-additives, health.

The safety of feed additives, which have routinely been put in poultry rations since the 1940's, is now being questioned. Recent concern over possible health problems has led to a proposal by the Food & Drug Administration (FDA) that use of such additives be further restricted. Some believe that excessive use poses health or safety problems, but, others think that restrictions would lower production efficiency and raise costs to consumers. This article reviews the economic basis for weighing these conflicting interests and points out how little information is available for evaluating the impact of new restrictions. It does not evaluate the human health or safety aspect but limits its scope to what would happen to the economics of poultry production if additives were further restricted as proposed.

The use of additives in poultry rations has decreased bird morbidity and mortality and improved growth rates and feed efficiency. In experiments, use of feed additives have been associated with disease prevention, better reproductive performance, and higher quality eggs and meat. Knowing that feed additives are available for disease prevention and control is also important to poultry producers.

The use of specific drugs in animal rations is regulated by FDA, which has published proposals that could further restrict the use of penicillin, tetracyclines, and the nitrofurans. It is believed that excessive use of penicillin and tetracyclines, especially in animal feed, may lead to development of drug-resistant strains of certain pathogenic organisms. In turn, new resistance could make these drugs less effective for treatment of human health problems (3, pp. 5-11). Thus, proposals to ban routine subtherapeutic use of these drugs in animal feed are being considered. Moreover, there is also evidence that laboratory animals fed rations supplemented with nitrofurans develop tumors. Therefore, the possibility of nitrofuran residues in human food raises questions as to whether these additives threaten human health. So, a complete ban on feed use of nitrofurans is being considered. Although the proposals for all three additives—penicillin, tetracyclines, and nitrofurans—have been considered for several years, final disposition is yet to come.

Frequency of Additive Use in Poultry Feed

Statistical data on patterns of additive use in poultry rations by commercial producers are not available; however, data obtained from a private research firm and results of a survey of poultry scientists indicate that in 1976 penicillin and tetracylines were used at subtherapeutic levels in rations fed to 10 to 40 percent of all birds in production, depending upon the stage of production and species and ages of the birds (table 1A). Nitrofurans were used in rations fed to 20 to 30 percent of the chickens and up to 90 percent of the turkey poults. In general, rations for young birds were supplemented with additives more frequently than was feed given to older birds.

Data were not available on the exact dosages or schedules of drug use. Thus, individual flocks may have received more than one additive, either within one stage of production or during different stages. Nevertheless, it appears that, at some stage of production, well over half the birds housed in 1976 received drug supplements from at least one of the three additive groups.

The Effectiveness of Additives

Little information is available on the efficacy of the different additives under field conditions. But, from the survey of poultry scientists and a review of poultry science research, estimates were calculated for the efficacy of certain additives in poultry rations in 1976 (table 2A). However, the ranges reported by the individual scientists suggest that there are many complex variables which influenced the effectiveness of using feed additives for a specific flock. Chickens appeared to respond most to tetracyclines; in egg and broiler production, the drugs apparently increased feed efficiency and bird productivity and lowered mortality and condemnations. Nitrofurans were the most effective in turkey production and

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have been most useful for reducing mortality, especially among poults.

In all species, young birds were more responsive to feed additives than were older birds. Also, estimated improvements in mortality rates among young birds emphasized to poultry producers that drugs in rations insured against disease.

The effectiveness of the additives varied with other factors besides bird age. In general, response rates have been relatively high among lower performance flocks. The effects of feed additives were often more noticeable under environmental conditions and management practices conducive to low flock performance. Rates of response also varied among breeds and strains of birds. Even with these variations, though, it appeared that additives in poultry rations usually did enhance production performance.

Feed additives can also produce some benefits that are not easily identified and isolated or are not measured by the performance criteria. In meat birds, disease prevention can also mean improved color, flavor, texture, uniformity, and conformation. Moreover, improvements in the interior quality of eggs have been associated with feeding additives in the laying ration. There is even evidence that additives fed to breeding hens improved viability of their chicks.

The Economic Impact of Proposed Restrictions

The likely economic effects of the proposed restrictions were estimated after the poultry industry's average production (table 3A) and output and costs (table 4A) for 1976 were described. For each restriction, changes in the average performance of birds that would have received the additive were estimated. The impact of these changes on industry average performances was then calculated. Changes reported in table 3A are those associated with the most effective drug for each species. Industry output and costs under each restriction were estimated and compared with output and costs in 1976 (table 4A). The effects of the restrictions were estimated for two possible industry reactions:

(1) no change in basic stock replacements, thus a decrease in final output; and

(2) an increase in stock replacement sufficient to maintain 1976 output.

Each restriction would have lowered industry's average production performance and increased cost per unit. Feed costs represent the largest percentage of total production costs, and the restrictions could have decreased output per pound of feed used. With the additional restrictions on the use of tetracycline drugs, production costs could have increased as much as 2.6 cents per ready-to-cook (RTC) pound of broiler meat and 1.7 cents per dozen eggs. Under the nitrofuran ban, production costs could have increased as much as 2.3 cents per RTC pound of turkey meat.

The estimates are based upon the independent effects of individual restrictions for each species of poultry. If all additional restrictions were imposed simultaneously, the estimated cost increases would have been even larger. In either situation, the increases in cost per pound would have exceeded estimated net returns per pound in 1976—about 1 cent for broilers and 1.1 cent for turkeys (4, p. 19). If the tetracycline restrictions had been imposed, the added costs of maintaining 1976 output would have been about $74 million for egg production and $179 million for broiler production. Under the nitrofuran ban, the added costs would have been as much as $30 million for turkey production.

The estimates were based on the assumptions that different additives could not be substituted for the three groups studied and that the effects of each additive were independent. The substitution of other additives or different management practices could lessen the impact of the restrictions. However, the feasibility and efficacy of field use of specific alternatives have not been adequately tested. On the other hand, the impact may be greater if more than one of the three drugs were given at different stages of the production cycle, producing cumulative effects in a given flock.

Other effects may result from restricting the use of additives in poultry rations. The poultry industry evolved to its current condition—characterized by large-scale, highly automated, geographically concentrated production units—when these drugs were available for routine, nonprescription use. Much of todays production technology was developed with feed additives as part of the resource mix. Also, most poultry is now confined at a relatively high density in an artificially controlled environment. Many current production practices that contribute to high efficiency also increase chances of exposure to disease. Additional restrictions on feed additives may mean foregoing part of the savings from modern practices.

The estimated increases in production costs are relatively small on an industry-average basis. However, the producers likely to have used the additives would absorb a disproportionate share of the costs of additional restrictions. Some of these producers could lose entire flocks and be forced out of the industry, thus further decreasing poultry supplies and pushing up prices. Producers who have not been using additives could also be affected, because the geographic concentration in poultry production and relationships among farms using common supplies and product assembly systems could transfer poultry diseases among farms.

For retail prices, additional restrictions on the use of feed additives would mean that consumers will pay more for poultry.

The Need for Additional Research

Few definitive data are available on the effectiveness and the possible effects of restricting feed additives. Moreover, in many instances, in the current production environment the little information available may be of questionable validity. Broad field surveys are needed on how frequently the various feed additives are used and how effective they are in current commercial production. Much of the research on additives and their effects on poultry and egg production was conducted in the 1950's and the beginning of the 1960's, during the early years of drug technology. These results and those of laboratory research may not be directly transferable to production under current field conditions. Responses from the poultry scientists in the survey were mostly personal observations. The ranges of responses that individual scientists gave to particular questions would suggest that there are many complex variables that influence the effectiveness of each drug for a specific flock. Additional data would allow a more thorough and accurate analysis of how restricting various feed additives would affect both poultry producers and consumers.

References

(1) 1) Burbee, C.R., R. Lenshan, and G. Allen. *Food and Drug Administration Proposal to Restrict the Use of Selected Antibiotics at Subtherapeutic Levels in Animal Feeds*, Economic Research Service, USDA, E.R.S.-662, Washington, D.C., September 1977.

(2) 2) Henson, William L. *Economic Impact of Restrictions on Use of Feed Additives in the Poultry Industry*, A.E. and R.S. 147, Pennsylvania State University, University Park, Pennsylvania, January 1980.

(3) 3) U.S. Department of Agriculture, Econ., Stat. and Coop. Service. *Economic Effects of Prohibition on the Use of Selected Animal Drugs*, National Economic Analysis Division, Agricultural Economics Report No. 414, Washington, D.C., November 1978.

(4) 4) U.S. Department of Agriculture, Econ. Stat. and Coop. Service. *Poultry and Egg Situation*, P.E.S. 304, Washington, D.C., January 1980.

Table 1A. Estimated Frequency of Use of Selected Feed Additives in Poultry Production, 1976 a/

Stage of Production	Age of Birds	Additive b/ Penicillin	Tetracyclines	Nitrofurans
		(Percentage of all birds receiving any)		
Chickens				
Breeders	5 months and older	10	40	20
Replacement pullets	up to 5 months old	20	30	20
Table egg layers	5 months and older	10	20	0
Broiler chickens	up to 8 weeks old	20	40	30
Turkeys				
Breeders	24 weeks and older	15	15	15
Poults	up to 8 weeks old	30	30	90
Growing birds	8 weeks and older	10	20	20

a/ Source: (2), pp. 18 to 20, 30, and 40-42.
b/ Subtherapeutic doses for penicillin and tetracyclines. All dosages for nitrofurans.

Table 2A. Estimated changes in production performance of chickens fed subtherapeutic levels of tetracyclines and turkeys fed nitrofurans in feed rations, 1976. a/

Stage of Production	Age of Birds	Performance Criteria	Percentage Improvement of Birds Using
			(range)
Chickens			
Breeders, egg layers	5 months and older	Reproductive performance b/	5-10
		Feed efficiency	4-8
		Mortality	2-7
Replacement pullets	up to 5 months old	Feed efficiency	4-8
		Mortality	10-15
Broilers	up to 8 weeks old	Growth rate, feed efficiency	6-12
		Mortality	8-12
		Condemnations	10-15
Turkeys			
Breeders	24 weeks and older	Reproductive performance b/	(-5)-5 c/
		Feed efficiency	1-2
		Mortality	1-2
Poults	up to 8 weeks old	Growth rate, feed efficiency	2-5
		Mortality	40-60
Growing Birds	8 weeks and older	Growth rate, feed efficiency	2-4
		Mortality	5-10
		Condemnations	4-9

a/ Source: (2), pp. 18 to 20, 30, and 40 to 42.
b/ Eggs per layer and percentage hatchability of hatching eggs set.
c/ There is evidence that use of nitrofurans in layer rations can be associated with decreased lay rates.

Table 3A. Estimated effects of restrictions on use of certain feed additives in poultry rations on industry production performance, 1976. a/

Performance Criteria	Units	Performance: Base Year	Performance: With Restrictions	Performance: % Change
			(Tetracyclines restricted at subtherapeutic levels)	
Egg Production				
Breeder mortality	%b/	22.1	22.7	2.8
Eggs per breeder	No.	235.0	226.5	-3.6
Hatchability, fertility	% eggs set	82.8	79.8	-3.6
Pullet mortality	% housed	6.0	6.3	5.3
Layer mortality	%	16.1	16.3	1.5
Eggs per layer	No.	246.6	242.1	-1.8
Broiler Production				
Breeder mortality	%b/	17.5	18.0	2.8
Eggs per breeder	No.	150.0	144.6	-3.6
Hatchability, fertility	% eggs set	81.8	78.8	-3.6
Breeder pullet mortality	% housed	6.0	6.3	5.3
Broiler mortality	% housed	5.3	5.6	5.5
Liveweight broilers sold	lbs. each	3.8	3.7	-4.2
Plant condemnations	% liveweight	1.9	2.0	6.9
Turkey Production			(Nitrofurans banned)	
Breeder mortality	%b/	15.0	15.0	.0
Eggs per breeder	No.	160.0	158.9	-.7
Hatchability, fertility	% eggs set			
Light breeds		67.3	66.9	-.7
Heavy breeds		71.9	71.4	-.7
Breeder pullet mortality	% housed	6.0	14.1	135.0
Poult mortality	% housed	4.0	9.4	135.0
Poult growth	lbs. each			
Light breeds		4.0	3.8	-4.3
Heavy breeds		5.0	4.8	-4.3
Grow-out mortality	% housed			
Light breeds		3.5	3.6	2.3
Heavy breeds		6.6	6.8	2.3
Grow-out growth	lbs. each			
Light breeds		5.2	5.2	-.8
Heavy breeds		14.3	14.2	-.8
Plant condemnations	% liveweight	2.3	2.3	1.5

a/ Source: (2), pp. 22, 32, and 45.
b/ Percentage of average number of breeders on hand for the year.

Table 4A. Estimated effects of restrictions on use of certain feed additives in poultry rations on industry output and production costs, 1976.a/

Output and costs	Units	Base Year performance	Performance with restrictions b/			
			A		B	
			Output/costs	% Change	Output/costs	% Change
			(Tetracycline restricted at subtherapeutic levels)			
Egg production						
Eggs produced	billions	59.00	54.47	-7.51	59.00	.00
Feed/doz. eggs	lbs.	5.00	5.18	3.60	5.20	4.00
Cost/doz. eggs	cents	44.00	45.70	3.86	45.50	3.41
Broiler Production						
R.T.C. lbs. certified	billions	8.97	7.91	-11.87	8.97	.00
Feed/lb. R.T.C.	lbs.	3.42	3.66	7.08	3.66	7.14
Cost/lb. R.T.C.	cents	33.30	35.90	7.81	35.30	6.01
Turkey Production			(Nitrofurans banned)			
R.T.C. lbs. certified	billions	1.96	1.78	-8.91	1.96	.00
Feed/lb. R.T.C.	lbs.	4.19	4.34	3.65	4.34	3.65
Cost/lb. R.T.C.	cents	45.86	48.17	5.04	47.37	3.29

a/ Source: (2), pp. 22, 27, 29, 32, 37, 29, 45, 51, and 52.
b/ A = No change in basic stock replacement rates.
B = Increase in basic stock replacement rates to maintain base year output levels.

Table 35— Selected poultry and egg statistics*

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Table 1.-- Eggs: Production and disposition														
Number of layers:														
First of month														
1979	Mil.	291.7	292.1	290.2	288.6	285.3	283.4	283.7	285.1	287.2	290.2	291.7	294.5	
1980	Mil.	296.0	293.6	288.6	284.3	280.6	279.6	287.9	282.2	287.7	291.8	292.8	294.9	
1981	Mil.	293.7	290.4	289.9	284.8	282.4								
Average for month														
1979	Mil.	291.9	291.2	289.4	286.9	284.3	283.6	284.4	286.1	288.7	291.0	293.3	295.5	288.9
1980	Mil.	294.8	291.1	286.5	282.4	280.1	279.8	281.1	285.0	287.7	292.3	293.5	294.0	287.4
1981	Mil.	292.8	290.6	287.3	283.6									
Eggs per 100 layers:														
First of month														
1979	No.	65.5	64.6	65.0	66.6	66.3	66.7	66.0	65.4	65.5	64.9	65.4	66.4	
1980	No.	66.2	65.0	66.4	67.6	67.0	66.7	66.4	64.5	65.7	65.7	65.6	66.2	
1981	No.	66.6	65.6	66.8	67.4	67.0								
Average for month														
1979	No.	2,018	1,817	2,042	1,994	2,062	1,992	2,038	2,030	1,958	2,021	1,976	2,052	24,000
1980	No.	2,050	1,921	2,079	2,023	2,070	1,995	2,030	2,018	1,990	2,036	1,975	2,057	24,245
1981	No.	2,032	1,857	2,081	2,018									
Monthly egg production														
1979	Mil. doz.	491.0	440.8	492.4	476.8	488.5	477.0	483.2	484.2	471.1	489.2	483.2	505.3	5,777
1980	Mil. doz.	503.8	466.1	496.2	476.2	483.2	465.2	475.5	479.2	477.0	495.9	483.2	504.2	5,805
1981	Mil. doz.	500.7	449.7	498.4	476.8									
Eggs used for hatching														
1979	Mil. doz.	37.1	44.0	44.3	46.9	45.9	42.5	41.5	39.0	38.7	36.6	40.2	40.9	498
1980	Mil. doz.	39.7	44.3	43.4	44.8	42.6	41.2	39.1	39.9	40.9	39.0	41.7	42.4	499
1981	Mil. doz.	39.8	45.9	44.9										
Eggs broken commercially														
1979	Mil. doz.	54.8	47.3	53.1	53.2	62.9	66.0	65.2	67.8	55.9	67.2	57.6	50.4	701
1980	Mil. doz.	61.3	56.9	54.8	59.5	61.1	64.1	66.6	63.6	62.3	66.9	51.8	59.8	720
1981	Mil. doz.	61.9	53.4	62.3										
Cold storage stocks:														
Frozen egg products														
1979	Mil. lbs.	25.3	25.5	24.5	21.1	21.7	21.6	22.8	25.9	24.7	24.1	25.6	23.4	
1980	Mil. lbs.	23.4	22.1	23.8	23.4	25.9	26.6	28.6	29.4	30.7	29.7	29.2	25.3	
1981	Mil. lbs.	24.3	24.5	24.2	22.3	22.1								
Shell eggs														
1979	Mil. doz.	1.1	.7	.5	.7	.6	.8	.7	1.0	.8	.9	.7	.7	
1980	Mil. doz.	1.1	1.4	.7	.7	.9	1.4	1.5	1.2	.8	1.2	.4	.6	
1981	Mil. doz.	.9	.7	.6	1.0	1.0								
Shell equivalent all eggs 1/														
1979	Mil. doz.	20.3	20.0	19.1	16.7	17.1	17.2	18.1	20.6	19.6	19.2	20.2	18.5	
1980	Mil. doz.	18.9	18.3	18.8	18.4	20.6	21.6	23.2	23.5	24.1	23.7	22.6	19.3	
1981	Mil. doz.	19.4	19.3	19.0	17.9	17.8								
Exports:														
Shell eggs														
1979	Mil. doz.	2.7	2.5	2.7	3.2	3.3	3.0	2.9	3.4	3.5	5.2	5.2	4.3	42
1980	Mil. doz.	4.1	7.0	3.9	4.4	5.1	5.9	8.3	3.5	5.8	15.1	9.5	6.4	79
1981	Mil. doz.	9.6	14.4	4.8										
Shell equivalent all eggs 1/														
1979	Mil. doz.	5.5	6.0	6.2	6.8	5.3	5.2	6.7	5.7	6.1	9.6	7.2	7.4	78
1980	Mil. doz.	8.0	10.4	10.9	9.0	11.1	12.2	14.1	8.8	10.2	20.0	15.5	12.6	143
1981	Mil. doz.	15.2	22.1	16.7										
Per capita consumption:														
Shell eggs														
1979	No.	21.7	18.9	21.4	20.4	20.5	19.6	20.5	20.3	20.2	20.7	20.6	22.3	247
1980	No.	21.5	19.4	21.3	19.9	20.2	19.1	19.5	20.1	19.8	20.3	20.4	21.2	243
1981	No.	20.8	17.9	20.7										
All eggs 1/														
1979	No.	24.5	21.3	24.1	23.0	23.8	22.9	23.7	23.9	23.1	24.0	23.7	24.8	283
1980	No.	24.6	22.1	23.8	22.7	23.1	22.0	22.6	23.1	22.9	23.6	23.0	24.0	278
1981	No.	23.9	20.4	23.4										
Table 2.-- Eggs: Prices for shell eggs and egg products														
Shell eggs (price per dozen):														
Received by farmers, U.S. 2/ 3/														
1979	Cents	61.3	61.0	65.2	60.4	56.5	56.0	53.9	53.1	55.1	53.4	57.9	63.9	58.1
1980	Cents	57.0	51.4	55.3	52.2	47.3	48.9	51.1	57.7	61.7	59.0	65.8	72.6	56.3
1981	Cents	64.8	62.6	60.8	64.4	56.3								

*See footnotes at end of table.

Table 35– Selected poultry and egg statistics*-- Continued

Table 2.-- Eggs: Prices for shell eggs and egg products-- Continued

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Price to volume buyers, cartoned Grade A large 5/ 13-metro areas														
1979	Cents	72.79	70.17	75.66	71.33	64.34	66.08	64.45	63.10	7/	7/	7/	77.01	69.44
1980	Cents	65.19	60.64	66.58	62.02	55.24	58.51	62.95	69.89	71.36	68.77	78.68	81.15	66.75
1981	Cents	74.93	72.39	70.70	75.08									
New York														
1979	Cents	72.50	68.00	75.14	69.57	62.55	66.10	64.00	67.00	64.74	63.18	69.80	75.26	68.15
1980	Cents	62.54	59.95	63.95	60.32	55.10	59.05	68.09	69.90	72.76	69.00	80.61	81.00	66.86
1981	Cents	75.62	71.62	71.00	73.45									
Chicago														
1979	Cents	71.27	67.68	73.50	68.71	61.91	64.81	61.90	64.03	61.96	59.71	66.30	72.38	66.18
1980	Cents	59.89	56.30	60.65	56.75	50.85	54.55	63.16	65.94	68.80	64.30	75.69	77.27	62.85
1981	Cents	71.42	67.22	66.57	69.70									
Los Angeles, Grade AA														
1979	Cents	75.91	75.47	80.14	77.43	69.27	68.10	66.00	7/	7/	7/	7/	7/	73.19
1980	Cents	70.93	65.20	72.18	65.48	58.70	63.50	63.90	71.25	74.87	76.67	79.67	83.25	70.47
1981	Cents	76.10	80.46	76.32	77.29									
Egg products (price per lb.):														
Frozen, New York-- Philadelphia 6/														
Whole, light colored														
1979	Cents	43.25	41.36	42.94	42.56	44.53	43.31	42.31	41.17	43.57	42.81	45.94	45.68	43.29
1980	Cents	43.00	41.47	42.31	39.72	39.38	39.50	40.81	46.39	48.75	50.22	54.86	53.12	44.96
1981	Cents	46.17	45.00	45.53	42.78									
Whites														
1979	Cents	35.03	34.00	34.39	34.66	35.47	34.17	33.44	33.25	33.14	32.19	30.31	28.36	33.20
1980	Cents	26.81	25.75	25.75	25.28	24.75	24.50	24.62	26.94	28.62	27.75	28.71	29.94	26.62
1981	Cents	27.39	26.21	26.22	26.00									
Yolks, sugared														
1979	Cents	62.06	60.57	62.78	63.62	64.75	64.39	65.06	65.18	67.86	68.88	71.00	71.43	65.63
1980	Cents	69.88	67.62	68.50	67.00	66.94	69.29	71.19	81.33	91.06	95.44	99.21	98.56	78.84
1981	Cents	91.78	87.35	83.50	81.19									
ied, New York														
Whole														
1979	Dollars	1.71	1.68	1.68	1.71	1.74	1.76	1.78	1.74	1.74	1.74	1.78	1.77	1.74
1980	Dollars	1.72	1.65	1.64	1.58	1.52	1.53	1.59	1.80	1.95	2.05	2.23	2.18	1.79
1981	Dollars	2.10	1.94	1.92	1.80									
Yolks														
1979	Dollars	1.52	1.49	1.49	1.54	1.58	1.56	1.57	1.56	1.64	1.68	1.73	1.76	1.59
1980	Dollars	1.74	1.67	1.67	1.60	1.53	1.55	1.63	1.85	2.05	2.28	2.47	2.44	1.87
1981	Dollars		2.03	2.00	1.37									
Albumen, spray dried														
1979	Dollars	2.77	2.69	2.70	2.73	2.77	2.77	2.77	2.72	2.73	2.74	2.67	2.54	2.72
1980	Dollars	2.45	2.29	2.19	2.05	1.91	1.87	1.95	2.24	2.37	2.36	2.41	2.47	2.21
1981	Dollars	2.35	2.19	2.08	2.02									

Table 3.-- Poultry: Slaughter in federally inspected plants

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Young chicken:														
Number inspected														
1979	Mil.	317.3	268.6	321.4	315.7	360.0	334.8	344.2	366.2	298.2	356.3	283.7	276.8	3,843
1980	Mil.	330.3	304.0	315.6	338.3	344.2	333.4	338.9	328.9	323.0	337.7	273.4	313.0	3,881
1981	Mil.	331.3	294.3	343.5	351.6									
Liveweight pounds														
1979	Mil. lbs.	1,247	1,041	1,253	1,232	1,400	1,305	1,338	1,418	1,195	1,432	1,134	1,116	15,111
1980	Mil. lbs.	1,320	1,194	1,245	1,351	1,363	1,313	1,278	1,247	1,271	1,358	1,083	1,254	15,277
1981	Mil. lbs.	1,336	1,170	1,377	1,403									
Certified ready-to-cook														
1979	Mil. lbs.	897.3	749.1	905.0	889.8	1,013.5	940.7	965.3	1,026.3	863.2	1,038.0	820.1	807.2	10,916
1980	Mil. lbs.	955.2	867.7	899.1	977.7	992.3	952.6	929.7	905.0	924.6	987.6	785.4	911.8	11,089
1981	Mil. lbs.	965.5	849.7	998.7	1,017.9									
Cut-up, ready-to-cook weight														
1979	Mil. lbs.	335.5	288.6	355.7	310.9	370.5	335.7	326.3	376.4	298.4	342.4	311.4	336.2	3,988
1980	Mil. lbs.	369.8	316.5	370.8	341.0	420.7	370.8	401.7	396.0	371.2	434.2	351.4	379.2	4,523
1981	Mil. lbs.	373.1	341.3	418.8	415.3									
Further processed, RTC weight														
1979	Mil. lbs.	79.7	72.1	90.0	81.1	94.6	84.0	78.7	88.6	65.2	95.3	77.5	82.4	989
1980	Mil. lbs.	84.4	91.2	93.2	91.0	96.1	98.6	98.4	91.3	93.5	100.4	79.1	90.4	1,107
1981	Mil. lbs.	100.4	98.,8	99.6	100.3									

*See footnotes at end of table.

Table 35– Selected poultry and egg statistics*-- Continued

Table 3.-- Poultry: Slaughtered in federally inspected plants-- Continued

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Mature chicken:														
Number inspected														
1979	Mil.	18.3	16.0	18.9	19.3	17.0	14.7	14.8	18.0	15.8	18.9	14.2	15.1	201
1980	Mil.	22.5	22.0	18.9	20.7	17.2	14.5	12.5	11.6	13.9	17.7	11.7	15.9	199
1981	Mil.	20.7	17.6	20.9	20.1									
Liveweight pounds														
1979	Mil. lbs.	78.2	68.4	82.0	83.3	76.5	69.2	66.9	83.0	72.4	86.5	62.5	65.9	895
1980	Mil. lbs.	97.4	93.7	82.9	90.1	76.2	65.0	51.9	49.7	64.6	79.7	53.9	68.6	874
1981	Mil. lbs.	86.6	76.7	92.6	89.7									
Certified ready-to cook														
1979	Mil. lbs.	47.9	42.0	50.8	51.4	47.1	43.7	41.7	51.6	45.4	53.9	39.1	40.9	556
1980	Mil. lbs.	60.2	57.5	51.3	55.5	47.1	40.3	31.8	30.5	40.4	49.5	33.7	42.4	540
1981	Mil. lbs.	52.4	46.9	56.5	54.5									
Cut-up, ready-to cook weight														
1979	Mil. lbs.	.7	.3	.6	.7	.6	.2	.1	.2	.1	.3	.2	.3	4
1980	Mil. lbs.	.3	.3	.2	.3	.6	.1	.3	.5	.2	.6	.5	.2	4
1981	Mil. lbs.	.2	.2	.2	.2									
Further processed, RTC weight														
1979	Mil. lbs.	44.8	40.8	46.0	38.3	44.1	35.2	29.7	34.3	33.2	45.1	41.7	39.7	473
1980	Mil. lbs.	42.4	48.0	34.2	33.6	31.1	28.6	30.8	35.1	35.2	45.3	36.0	33.8	434
1981	Mil. lbs.	41.6	41.2	44.5	39.9									
Fryers--Roasters														
Number inspected														
1979	Mil.	.6	.6	.6	.6	.6	.8	.9	1.1	.8	.8	.8	.6	9
1980	Mil.	.9	.7	.9	1.0	1.0	.9	.8	.7	.7	.9	.7	.6	10
1981	Mil.	.9	.7	.8	.9									
Liveweight pounds														
1979	Mil. lbs.	5.8	5.4	5.4	5.8	5.2	8.0	8.6	9.6	8.0	8.0	7.3	5.4	83
1980	Mil. lbs.	8.6	7.0	8.8	9.4	9.0	8.6	7.2	6.5	6.3	7.9	6.8	6.2	92
1981	Mil. lbs.	8.3	6.7	7.4	8.2									
Certified ready-to cook														
1979	Mil. lbs.	4.5	4.2	4.3	4.6	4.1	6.4	6.8	7.5	6.3	6.2	5.7	4.3	65
1980	Mil. lbs.	6.6	5.3	6.9	7.4	7.0	6.8	5.7	5.1	5.0	6.2	5.3	4.8	72
1981	Mil. lbs.	6.5	5.2	5.7	6.4									
Young turkey														
Number inspected														
1979	Mil.	5.6	4.7	6.2	7.4	10.2	12.5	14.0	17.1	14.5	18.9	16.1	9.9	136
1980	Mil.	8.0	6.7	7.9	8.8	11.5	13.2	15.9	14.9	15.6	16.9	15.0	11.3	146
1981	Mil.	8.0	7.4	8.6	9.7									
Liveweight pounds														
1979	Mil. lbs.	120.9	91.8	113.4	133.2	190.2	232.8	262.1	326.2	282.9	365.6	321.9	202.2	2,643
1980	Mil. lbs.	168.4	130.4	146.6	165.3	210.6	245.0	291.6	275.6	294.1	332.8	297.5	229.6	2,788
1981	Mil. lbs.	167.5	142.6	161.1	178.9									
Certified ready-to cook														
1979	Mil. lbs.	94.1	72.4	89.9	106.0	151.6	186.5	209.8	258.6	224.8	290.1	255.5	160.2	2,099
1980	Mil. lbs.	133.0	102.9	115.1	131.1	167.9	195.3	231.8	218.8	232.5	263.7	235.7	181.5	2,209
1981	Mil. lbs.	132.2	111.7	126.8	141.6									
Total turkey 8/														
Number inspected														
1979	Mil.	6.3	5.3	6.8	8.1	10.8	13.5	15.1	18.3	15.5	19.0	16.9	10.6	146
1980	Mil.	9.0	7.5	8.9	9.9	12.6	14.3	16.9	15.7	16.4	17.8	15.7	12.0	157
1981	Mil.	8.9	8.2	9.5	10.7									
Liveweight pounds														
1979	Mil. lbs.	127.8	97.9	119.8	141.2	197.5	244.6	274.3	337.9	293.3	375.0	330.0	209.0	2,748
1980	Mil. lbs.	179.0	138.9	157.0	178.5	223.0	256.3	302.4	284.2	303.4	342.7	305.2	237.0	2,908
1981	Mil. lbs.	177.5	151.6	170.4	189.5									
Certified ready-to cook														
1979	Mil. lbs.	99.3	77.2	95.0	112.3	157.3	195.9	219.2	267.7	233.0	297.5	261.9	165.5	2,182
1980	Mil. lbs.	141.1	109.4	123.2	141.4	177.5	204.2	240.2	225.5	239.8	271.5	241.8	187.3	2,303
1981	Mil. lbs.	140.0	118.6	134.0	149.8									
Cut-up, ready-to cook weight														
1979	Mil. lbs.	41.7	34.4	40.5	37.4	44.9	43.9	43.8	52.9	38.2	53.7	49.0	45.4	526
1980	Mil. lbs.	55.8	47.8	47.3	45.7	52.1	55.1	51.0	51.6	50.8	63.9	57.1	57.4	636
1981	Mil. lbs.	52.4	45.0	51.9	41.4									
Further processed, RTC weight														
Whole bird 9/														
1979	Mil. lbs.	15.8	13.9	20.7	19.2	35.0	55.7	48.4	73.7	66.3	90.8	64.0	34.4	538
1980	Mil. lbs.	28.4	30.7	31.3	29.3	44.0	46.1	70.0	67.3	83.6	102.1	64.0	53.7	651
1981	Mil. lbs.	26.9	23.4	29.8	31.8									
Other														
1979	Mil. lbs.	50.9	50.9	58.1	51.5	66.7	61.0	72.5	90.5	60.4	90.4	80.4	66.4	800
1980	Mil. lbs.	61.1	61.7	65.9	56.0	71.0	81.9	85.2	87.8	96.0	93.2	74.9	74.0	909
1981	Mil. lbs.	94.2	60.3	76.9	71.1									

*See footnotes at end of table.

Table 4-- Total poultry slaughter and commercial red meat production

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Total poultry slaughter 10/														
1979	Mil. lbs.	1,057	878	1,063	1,066	1,232	1,195	1,241	1,363	1,156	1,407	1,136	1,026	13,820
1980	Mil. lbs.	1,170	1,047	1,081	1,183	1,226	1,206	1,211	1,170	1,215	1,319	1,070	1,150	14,048
1981	Mil. lbs.	1,171	1,027	1,203	1,236									
Commercial red meat production, carcass weight														
1979	Mil. lbs.	3,280	2,756	3,090	2,879	3,130	2,990	2,958	3,329	2,876	3,556	3,306	3,074	37,224
1980	Mil. lbs.	3,393	3,048	3,100	3,310	3,314	3,090	3,065	3,020	3,221	3,577	3,100	3,346	38,584
1981	Mil. lbs.	3,416	3,011	3,333	3,296									

Table 5.-- Poultry: Cold storage holdings and exports

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Cold storage holdings, first of month (ready-to-cook weight)														
Broilers, fryers, roasters														
1979	Mil. lbs.	20.1	17.9	17.6	18.4	17.1	21.6	19.3	23.5	25.6	28.7	32.1	31.6	
1980	Mil. lbs.	30.6	27.3	31.1	31.2	32.4	32.1	34.2	31.8	30.9	26.8	28.4	25.1	
1981	Mil. lbs.	22.4	27.1	26.8	24.8	28.0								
Total chicken														
1979	Mil. lbs.	101.9	106.0	100.6	100.7	105.3	112.1	123.5	133.2	138.0	150.3	158.1	149.8	
1980	Mil. lbs.	142.1	133.9	137.6	149.1	162.0	163.0	167.2	161.4	157.1	150.2	151.7	140.2	
1981	Mil. lbs.	136.5	146.7	142.3	148.9	159.6								
Turkey														
Whole Bird														
1979	Mil. lbs.	117.0	110.3	99.0	86.3	79.9	102.2	146.4	208.7	305.1	355.3	368.6	216.5	
1980	Mil. lbs.	171.2	169.0	151.5	143.4	142.3	170.3	218.3	251.9	305.7	324.6	346.8	345.1	
1981	Mil. lbs.	137.2	138.2	138.8	154.8	164.3								
Other														
1979	Mil. lbs.	58.1	60.3	55.7	49.4	48.1	50.9	54.5	63.8	77.4	77.0	76.9	64.7	
1980	Mil. lbs.	68.8	77.8	73.4	65.5	64.4	63.5	68.3	74.0	78.3	74.2	73.4	63.2	
1981	Mil. lbs.	60.8	69.7	69.1	65.9	65.4								
Total turkey														
1979	Mil. lbs.	175.1	170.7	154.7	135.7	128.0	153.1	200.9	272.5	382.5	432.3	445.5	281.2	
1980	Mil. lbs.	240.0	246.8	225.0	208.9	206.6	233.8	286.6	325.8	384.0	398.8	420.2	257.6	
1981	Mil. lbs.	198.0	207.9	207.9	220.7	229.7								
Total poultry														
1979	Mil. lbs.	280.1	279.8	258.2	238.9	235.6	267.7	327.8	411.0	527.0	589.6	610.0	436.6	
1980	Mil. lbs.	386.9	385.1	366.4	361.0	372.4	402.0	460.6	495.0	548.3	556.2	579.0	402.6	
1981	Mil. lbs.	339.0	359.0	354.2	372.7	392.4								
Exports (ready-to-cook weight):														
Young chicken														
1979	Mil. lbs.	21.9	23.7	36.5	25.3	25.3	32.1	31.1	28.4	33.3	47.0	33.8	56.4	402
1980	Mil. lbs.	25.9	25.8	51.3	36.5	50.5	66.2	48.3	41.0	54.4	60.5	50.2	56.5	567
1981	Mil. lbs.	52.5	45.6	54.2										
Other chicken														
1979	Mil. lbs.	2.9	2.2	2.3	1.7	1.5	2.0	2.7	1.6	3.0	4.1	4.0	7.6	36
1980	Mil. lbs.	1.7	1.3	1.7	4.4	2.2	3.1	7.7	3.5	1.3	7.3	5.7	8.4	53
1981	Mil. lbs.	9.4	3.5	2.9										
Turkey														
1979	Mil. lbs.	3.7	2.7	2.9	2.7	3.1	3.6	4.9	5.2	5.9	6.2	4.4	4.6	50
1980	Mil. lbs.	4.2	4.1	4.6	4.6	6.	4.1	7.4	8.3	6.9	9.5	7.4	7.3	75
1981	Mil. lbs.	3.1	4.3	4.6										

Table 6.-- Poultry: Chicken and turkey prices

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Broilers:														
Liveweight, U.S. farm 11/														
1979	Cents	27.4	29.4	28.7	28.0	29.5	27.2	24.7	23.0	23.0	21.2	24.9	26.1	26.1
1980	Cents	27.1	25.1	24.0	22.6	24.1	24.5	32.0	32.1	32.0	31.4	30.2	29.7	27.8
1981	Cents	30.2	30.4	29.7	26.8	28.2								
Wholesale weighted average, ready-to cook weight 12/														
9-city average 13/														
1979	Cents	45.8	49.2	47.5	47.5	49.4	46.1	42.8	39.6	39.9	37.0	42.6	45.5	44.4
1980	Cents	45.8	42.7	40.5	38.9	41.1	43.3	52.8	52.4	54.8	51.4	49.7	48.6	46.8
1981	Cents	49.5	50.3	48.2	44.4	46.3								
New York														
1979	Cents	44.8	48.4	46.7	46.6	48.5	45.1	41.7	38.7	39.0	36.3	41.7	44.4	43.5
1980	Cents	44.6	41.6	39.3	37.8	40.1	42.5	50.6	51.6	53.2	50.0	48.3	47.0	46.6
1981	Cents	48.8	49.9	47.5	43.5									

Table 6.-- Poultry: Chicken and turkey prices-- Continued

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Chicago (U.S. Grade A)														
1979	Cents	45.4	48.7	47.1	46.7	49.0	45.3	41.4	39.0	39.3	36.4	42.7	45.5	43.9
1980	Cents	45.1	42.2	39.9	38.1	40.7	42.7	52.7	51.7	54.6	51.0	48.9	48.2	46.3
1981	Cents	48.5	49.1	47.2	43.2									
Los Angeles														
1979	Cents	43.2	51.5	50.1	50.0	51.4	48.9	46.4	32.4	42.7	39.4	44.2	47.7	46.1
1980	Cents	48.8	45.8	43.5	42.2	44.0	46.0	57.0	54.8	58.1	54.9	53.6	52.4	50.1
1981	Cents	52.3	53.2	51.0	47.7									
Turkeys:														
Liveweight, U.S. at farm 3/														
1979	Cents	47.2	45.1	43.4	42.8	42.0	39.7	37.7	38.4	38.0	40.1	45.9	46.8	42.2
1980	Cents	38.8	36.3	35.8	33.7	31.9	32.6	38.4	41.8	45.8	49.1	50.1	46.1	40.0
1981	Cents	39.8	38.9	40.3	38.4	39.0								
Wholesale, frozen, f.o.b. or equiv., RTC weight 1/ 4/														
New York														
Hens, 8-16 pounds														
1979	Cents	72.9	67.6	70.0	68.6	65.2	64.7	63.0	63.1	63.3	68.4	15/74.6	75.4	68.1
1980	Cents	62.3	57.8	56.8	54.1	53.3	55.5	63.3	67.2	74.5	77.0	75.0	67.0	63.6
1981	Cents	59.4	60.7	63.8	61.2									
Toms, 14-20 pounds														
1979	Cents	74.0	68.3	67.8	67.1	63.1	58.0	57.2	57.4	58.8	64.0	71.4	67.2	64.5
1980	Cents	55.2	57.0	56.6	52.9	48.4	52.5	63.4	68.3	73.4	77.2	76.2	68.3	62.4
1981	Cents	60.2	57.9	61.7	59.6									
Toms, 24-26 pounds														
1979	Cents	74.9	72.1	70.0	68.1	66.7	64.9	64.2	63.5	64.1	65.6	69.9	67.4	67.6
1980	Cents	62.8	61.3	59.5	58.4	56.7	57.3	62.3	68.5	74.7	76.8	76.9	73.8	65.8
1981	Cents	64.9	63.4	66.9	67.8									
Chicago														
Hens, 8-16 pounds														
1979	Cents	73.4	66.4	1/5/68.5	67.7	64.0	63.6	62.2	61.7	62.2	67.2	75.2	75.7	67.3
1980	Cents	61.5	56.4	55.4	53.3	51.9	54.9	62.5	65.6	73.1	76.3	74.5	66.2	62.6
1981	Cents	58.7	60.3	62.6	60.2									
Toms, 14-20 pounds														
1979	Cents	72.9	66.8	66.2	66.5	63.2	57.4	56.3	56.1	1/5/56.9	63.2	71.6	66.2	63.6
1980	Cents	55.6	55.5	53.4	52.0	47.2	51.5	62.5	67.1	73.2	76.2	75.2	67.7	61.4
1981	Cents	59.6	59.5	60.8	58.4									
Toms, 24-26 pounds														
1979	Cents	74.1	71.3	69.5	68.1	66.2	64.8	63.4	62.8	63.0	64.3	69.2	67.1	67.0
1980	Cents	62.1	60.1	58.6	57.9	55.8	56.2	60.7	67.4	73.3	75.5	75.7	73.6	64.7
1981	Cents	66.0	63.6	66.3	67.8									
Paid at seller's dock frozen, ready-to-cook weight 1/6/														
New York														
Hens, 8-16 pounds														
1979	Cents	78.8	72.2	73.4	73.2	68.6	67.9	66.9	66.7	67.0	71.3	79.3	79.5	72.1
1980	Cents	66.8	62.2	61.0	59.1	58.0	59.6	66.0	70.6	76.8	80.6	79.9	73.2	67.8
1981	Cents	64.4	64.5	67.1	65.3									
Toms, heaviest weight quoted														
1979	Cents	91.0	90.8	90.0	89.5	90.9	91.0	91.0	91.5	91.4	93.1	94.5	92.9	91.5
1980	Cents	88.2	84.8	80.4	78.1	78.0	78.9	82.0	87.3	90.1	91.3	88.5	89.5	84.8
1981	Cents	89.1	89.9	89.4	92.9									
Chicago														
Hens, 8-16 pounds														
1979	Cents	78.6	70.8	72.1	72.5	68.2	67.5	66.1	66.0	66.0	70.8	78.8	79.7	71.4
1980	Cents	67.5	62.0	60.5	58.8	56.8	58.9	66.0	69.8	77.6	81.4	80.6	73.8	67.8
1981	Cents	64.5	64.1	67.2	65.8									
Toms, heaviest weight quoted														
1979	Cents	88.0	88.0	88.5	87.8	87.2	84.2	87.5	87.5	87.5	87.9	89.0	88.4	87.6
1980	Cents	82.8	79.4	74.6	72.2	72.0	72.1	72.9	75.6	81.4	83.5	83.5	83.5	77.8
1981	Cents	84.5	85.8	86.4	88.0									

*See footnotes at end of table.

Table 35– Selected poultry and egg statistics*

Table 7.-- Prices paid for feed ingredients and poultry feed, and product-feed ratios

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Corn, Chicago No. 2 yellow (price per bushel)														
1979	Dollars	2.29	2.35	2.42	2.53	2.66	2.83	3.00	2.83	2.78	2.73	2.59	2.69	2.64
1980	Dollars	2.54	2.65	2.60	2.61	2.70	2.70	3.08	3.36	3.34	3.43	3.43	3.43	3.00
1981	Dollars	3.56	3.47	3.48	3.53									
Soybean meal, 49-50 percent, Decatur, Ill. (per ton, bulk)														
1979	Dollars	201	207	210	207	205	228	221	205	205	198	197	205	207
1980	Dollars	195	189	180	168	181	175	202	222	252	263	277	239	212
1981	Dollars	240	229	226	236									
Poultry feed (per ton, bulk 3/														
Laying 1/ 7/														
1979	Dollars	157	159	162	163	163	166	177	174	173	174	171	174	168
1980	Dollars	173	172	174	173	176	176	179	193	199	206	218	220	188
1981	Dollars	218	219	215	215	217								
Broiler grower														
1979	Dollars	175	179	184	185	184	186	199	199	195	196	193	195	189
1980	Dollars	193	194	193	193	189	190	192	212	222	228	237	238	207
1981	Dollars	237	238	229	234	235								
Turkey grower														
1979	Dollars	188	192	196	200	201	203	214	206	206	207	203	208	202
1980	Dollars	204	202	203	200	204	208	213	230	240	247	260	261	223
1981	Dollars	257	255	254	254	255								
Product-feed price ratios:														
Egg 1/ 7/														
1979	Pounds	7.8	7.7	8.0	7.4	6.9	6.7	6.1	6.1	6.4	6.1	6.8	7.3	6.9
1980	Pounds	6.6	5.9	6.3	6.0	5.3	5.5	5.7	6.0	6.2	5.7	6.0	6.6	6.0
1981	Pounds	5.9	5.7	5.7	6.0	5.2								
Broiler 1/ 8/														
1979	Pounds	3.1	3.3	3.1	3.0	3.2	2.9	2.5	2.3	2.4	2.2	2.6	2.6	2.8
1980	Pounds	2.8	2.6	2.5	2.3	2.5	2.6	3.3	3.0	2.9	2.8	2.5	2.5	2.5
1981	Pounds	2.5	2.6	2.6	2.3	2.4								
Turkey 1/ 9/														
1979	Pounds	5.0	4.6	4.3	4.3	4.2	3.9	3.5	3.7	3.7	3.9	4.5	4.3	4.1
1980	Pounds	3.8	3.6	3.5	3.4	3.1	3.1	3.5	3.5	3.7	3.9	3.8	3.5	3.5
1981	Pounds	3.1	3.1	3.2	3.0	3.1								

Table 8.-- USDA contracts to purchase chicken and turkey

Item	Data in--	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Young chicken (ready-to-cook wt.)														
1979	Mil. lbs.	5.4	8.6	6.8	2.1	--	--	--	11.9	12.7	10.4	5.4	7.1	70.4
1980	Mil. lbs.	15.6	10.7	2.4	--	--	--	1.9	5.8	9.1	8.7	7.7	3.7	65.6
1981	Mil. lbs.	10.4	7.2	2.2										
Canned boned chicken (RTC wt.)														
1979	Mil. lbs.	6.9	4.4	9.7	--	--	--	--	--	1.0	5.6	10.8	6.1	44.5
1980	Mil. lbs.	9.2	8.2	4.1	--	--	--	--	1.8	7.6	5.4	4.6	6.1	47.0
1981	Mil. lbs.	--	.8	1.6										
Turkey (ready-to-cook wt.)														
1979	Mil. lbs.	13.3	3.7	2.8	--	--	--	6.6	9.5	15.3	15.3	10.9	18.8	96.2
1980	Mil. lbs.	16.3	10.4	1.5	--	--	--	3.9	7.7	8.2	23.0	13.2	15.4	99.6
1981	Mil. lbs.	7.2	--	--	--	--	--	--	7.7	14.5	14.0	9.4	9.8	80.0
Canned boned turkey (RTC wt.)														
1979	Mil. lbs.	--	--	--	--	--	--	--	--	--	--	--	--	--
1980	Mil. lbs.	--	--	--	--	--	--	--	--	--	--	--	--	--
1981	Mil. lbs.	--	--	--										

1/Shell eggs plus the shell egg equivalent of egg products. 2/All eggs, including hatching eggs and eggs sold at retail. 3/Price as of 15th of month. 4/Delivered f.o.b. buyer. 5/Delivered store door. 6/30-pound containers, carlot or trucklot. 7/Insufficient prices data. 8/Includes fryers-roasters, young turkeys, and old turkeys. 9/Whole carcass turkeys which have been injected, basted, marinated, etc. and package as such. 10/Includes federally inspected slaughter of all poultry plus other slaughter of chicken and turkey. 11/Price for month. 12/Trucklot sales of U.S. Grade A and plant grade, ice packed and CO2 chilled broilers delivered to major areas. 13/Computed by weighting the city average by their metropolitan area populations. 14/U.S. Grade A, carlots or trucklots. 15/Simple average. 16/U.S. Grade A, less than carlots. 17/Pounds of laying feed equal in value to 1 dozen eggs. 18/Pounds of broiler grower equal in value to 1 pound of broiler liveweight. 19/Pounds of turkey grower equal in value to 1 pound of turkey liveweight.

LIST OF TABLES

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