



United States  
Department of  
Agriculture

Economic  
Research  
Service

PES-314

August 1982

# Poultry and Egg

---

# OUTLOOK & SITUATION

---

# In This Issue

---

	<i>Page</i>
Factors Affecting the Poultry and Egg Industries . . .	4
Eggs .....	5
Mature Chickens .....	9
Broilers .....	9
Turkeys .....	13
Special Article:	
Estimating Net Returns for Broilers .....	18
List of Tables .....	2

Approved by  
The World Agricultural  
Outlook Board  
and Summary released  
August 27, 1982

Written by  
Allen Baker  
(202) 447-8636

Statistical Assistant  
Eunice B. Armstrong

Electronic Word Processing  
Francina F. Edwards

U.S. Department of Agriculture  
National Economics Division  
Economic Research Service  
Washington, D.C. 20250

Note to readers: You will receive a copy of the Livestock and Poultry Outlook and Situation to be issued in November.

## LIST OF TABLES

	<i>Page</i>
1. Commercial meat production and prices .....	3
2. Layers on farms and eggs produced .....	5
3. Egg-type chick hatchery operations .....	5
4. Force molting <sup>s</sup> and light - type hen slaughter, 1980-82 .....	5
5. Shell eggs broken and egg products produced under federal inspection, 1981-82 .....	6
6. U.S. egg exports to major importers, April-June 1981-82 .....	6
7. Egg prices and price spreads, 1981-82 .....	7
8. Shell eggs: Supply and utilization, 1980-82 .....	7
9. Total eggs: Supply and utilization, 1980-82 .....	8
10. Mature chicken supply and utilization, 1980-82 .....	8
11. U.S. mature chicken exports to major importers, April-June 1981-82 .....	9
12. Broiler chicks hatched and pullet chicks placed in hatchery supply flocks .....	9
13. Broiler: Eggs set and chicks placed weekly in 19 commercial States, 1980-82 .....	10
14. Federally inspected young chicken slaughter .....	11
15. U.S. young chicken exports to major importers, April-June, 1981-82 .....	11
16. Young chicken prices and price spreads, 1981-82 .....	12
17. Young chicken supply and utilization, 1980-82 .....	12
18. Turkey hatchery operations, 1981-82 .....	13
19. Federally inspected turkey slaughter .....	13
20. U.S. turkey exports to major importers, April-June 1981-82 .....	14
21. Turkey prices and price spreads, 1981-82 .....	14
22. Turkey supply and utilization, 1980-82 .....	15
23. Turkeys raised by State, 1981-82 .....	15
24. Estimated costs and returns, 1980-82 .....	17

# Summary

Turkey and egg producers will likely see favorable returns in fourth-quarter 1982, but broiler producers probably face continued poor returns. Favorable crop prospects are expected to hold down feed costs for poultry and egg producers. Export markets are weak, and demand for poultry and eggs continues sluggish despite reduced supplies of pork.

Egg output during September-November is expected to trail last year, possibly by 1 percent. Layer numbers may remain below last year. Low returns and high interest rates have, in most months, discouraged producers from maintaining replacement pullets at year-earlier levels, although they have been keeping old hens longer.

Cartoned large eggs in New York averaged about 64 cents per dozen during June-August, sharply below last year's 71 cents, partly because of weak exports. During September-November, with exports likely to continue slow, prices are expected to average 70-74 cents because of seasonal strengthening. This compares with last year's 77 cents.

Broiler producers have expanded output in response to the decline in red meat production. Broiler meat output in July-September is expected to increase 2 to 4 percent from last year. Production in the fourth quarter is

expected to increase 1 to 3 percent. Even though the hatchery supply flock will have fewer replacement pullets, producer are expected to respond to weak feed prices and the expanding economy by increasing output further in 1983.

Strained consumer budgets and reduced exports have kept broiler prices weak this year. During July-September, wholesale broilers in the 9 cities may average 42 to 44 cents, down from 47 cents last year. Fourth-quarter prices may average 40 to 44 cents, compared to 42 a year earlier.

Poult hatch numbers indicate that turkey meat output in the third quarter may be down 11 percent. But a sharp upturn in the poults hatched for fourth-quarter slaughter means production then may decline only about 2 percent.

This season, frozen turkey inventories have been kept more in line with expected use than last season. The reduction in both stocks and production will likely strengthen prices. During July-September, wholesale prices for 8- to 16-pound young hen turkeys in New York are expected to average 64 to 66 cents per pound, up from 63 cents last year. Prices should strengthen seasonally in the fourth quarter and may average 66 to 70 cents, sharply above last year's 55 cents.

**Commercial meat production and prices**  
(All percent changes shown are from a year earlier)

Item	1981				1982				1983
	I	II	III	IV	I	II	III <sup>1</sup>	IV <sup>1</sup>	I <sup>1</sup>
<i>Million pounds</i>									
<b>PRODUCTION</b>									
Broilers <sup>2</sup>	2,849	3,096	3,081	2,880	2,888	3,101	3,170	2,950	2,950
% change	+3	+3	+10	+5	+1	0	+3	+2	+2
Turkeys <sup>2</sup>	398	553	785	773	410	527	700	750	420
% change	+5	+5	+10	+8	+3	-5	-11	-3	+2
Beef <sup>3</sup>	5,561	5,435	5,541	5,677	5,449	5,363	5,700	5,700	5,500
% change	+6	+4	+3	+2	-2	-1	+3	0	+1
Pork <sup>3</sup>	4,073	3,881	3,605	4,157	3,695	3,550	3,225	3,325	3,350
% change	-1	-10	-4	-2	-9	-9	-11	-20	-9
Total <sup>4</sup>	13,437	13,427	13,460	14,023	12,983	13,014	13,238	13,256	12,770
% change	+3	-1	+3	+1	-3	-3	-2	-5	-2
<i>Million dozen</i>									
Eggs <sup>5</sup>	1,455	1,463	1,432	1,450	1,450	1,451	1,420	1,440	1,450
% change	-1	0	+1	0	0	-1	-1	-1	0
<b>PRICES</b>									
<i>Dollars per pound</i>									
Broilers,									
9-city avg. <sup>6</sup>	49.3	46.7	47.0	42.1	44.8	45.1	44-46	42-46	45-49
Turkeys, NY <sup>7</sup>	61.3	63.6	62.7	55.1	55.2	58.8	64-66	68-72	63-67
Choice steers,									
Omaha, 900-									
1100 lb	61.99	66.68	66.53	60.17	63.36	70.46	65-67	67-71	68-72
Barrows &									
gilts, 7 mkts	41.13	43.63	50.42	42.63	48.17	56.46	58-60	56-60	56-60
<i>Cents per dozen</i>									
Eggs <sup>5</sup>									
New York <sup>8</sup>	76.0	70.4	70.8	77.4	78.4	71.8	62-64	70-74	75-79

<sup>1</sup>Forecast. <sup>2</sup>Federally inspected slaughter. <sup>3</sup>Commercial production. <sup>4</sup>Includes mature chicken, veal, lamb, and mutton. <sup>5</sup>Marketing-year quarters beginning December 1. <sup>6</sup>Wholesale weighted average. <sup>7</sup>8- to 16-pound young hens. <sup>8</sup>Cartoned, consumer Grade A large, sales to volume buyers.

# Poultry and Egg Situation

## FACTORS AFFECTING THE POULTRY AND EGG INDUSTRIES

Turkey producers are expected to see better returns during the balance of 1982 than the year-earlier loss of 2.7 cents per pound. Broiler producers are expected to have negative returns, as they did last year. Egg producers' returns are expected to be positive but decline from the 4.8 cents per dozen in second-half 1981. Costs of production will likely remain about the same as last year, as feed costs decline. The sluggish general economy and weak export markets are pressuring prices, especially for broilers and eggs, and weakening returns. However, reduced production and smaller stocks of frozen turkeys are expected to strengthen turkey prices from their low levels of last year.

### General Economy Strengthens

The U.S. economy leveled off in the second quarter, and moderate growth is expected through the remainder of the year. The real output of goods and services (GNP) declined in the fourth quarter of last year and first-quarter 1982. However, real GNP grew in the second quarter, rising at about a 1-percent annual rate. The July tax cut and increased Social Security benefits should help stimulate the economy and GNP is expected to continue moderate growth through the remainder of 1982 and in early 1983. If the recent easing of interest rates continues, a stronger recovery is likely in 1983.

Real disposable personal income fell in January-March but increased in the second quarter from the first and from a year earlier. However, the wages and salaries component of real disposable personal income has been about steady and the gains are occurring only from increased interest income. If unemployment declines as the economy recovers, gains in personal income may strengthen poultry prices.

### Pork Supplies Down Sharply

Declining pork production will more than offset the slight rise in beef production during second-half 1982 and first-half 1983. Total red meat production through the first half of 1983 is expected to continue below a year earlier.

Pork output was down in the second quarter of 1982 and will continue to decline through mid-1983. July-September supplies will come mainly from the June 1 inventory of market hogs weighing 60-179 pounds, which was down 10 percent from June 1, 1981. In the first half of the summer quarter, hog slaughter was down about 8 percent, but it is expected to decline more sharply for the remainder of the quarter. With increasing producer margins and a very large corn crop in prospect, more gilts are expected to be retained on farms for breeding than a year ago. This would reduce July-September hog slaughter even more than the June 1 inventory would suggest. The March-May pig crop and the June 1 inventory of market hogs weighing less than 60 pounds indicate that October-December hog slaughter may drop

19-21 percent below a year earlier. Year-to-year declines in hog slaughter during first-half 1983 will narrow from fourth-quarter levels but stay well below the first half of 1982.

Decreased pork output has caused market prices to rise sharply. Barrows and gilts at 7 markets during July averaged \$60 per cwt, up from \$51 last year. Continued low supplies of hogs relative to a year earlier are expected to keep 7-market prices near \$60 for the remainder of this year and the first half of next year. These prices would be up from \$47 in the last half of 1981 and \$52 in the first half of 1982.

August 1 inventories of cattle on feed suggest that fed cattle marketings during July-December will be up 4 to 6 percent from the second half of 1981. Total beef production is expected to increase 2 percent during the remainder of 1982 with more steers and heifers entering feedlots than last year. Of longer run importance, the July 1 inventory of beef cows decreased 4 percent, stalling the expansion in cattle numbers that began in 1980. The 1982 calf crop is expected to be 3 percent below last year.

Cattle prices declined slightly in late July and early August as more cattle were marketed and consumers resisted higher retail prices. Choice steers (900 to 1,100 pounds) at Omaha averaged \$70.46 a cwt during April-June, but declined to the mid-\$60's in August. Prices are expected to average in the \$67-\$69 range during the second half of 1982, still well above the \$64 of a year earlier. With low pork supplies and only modest increases in beef production, Choice steer prices may average \$70 to \$73 per cwt in the first half of next year, up from \$65 this year.

### Production Costs To Remain About Steady

Poultry production costs are expected to remain about steady for the balance of 1982. Feed costs may dip slightly from now through harvest, but other costs may continue to climb. Feed costs are expected to decline with prospects of record crops and the extension, from 30 days to 60 days, of the preharvest rotation period for corn in the farmer-owned reserve (FOR).

Even though the FOR has limited free stocks, grain prices have been weak this year because of sluggish export demand. The weak world economy and the strong U.S. dollar have hurt exports. Also, the general perception of continued low prices may discouraged users from stockpiling grain for future needs.

Both corn and soybeans are expected to be in plentiful supply during 1983. As of August 1, the U.S. corn crop was forecast at 8.3 billion bushels, up from the record-large 8.2 billion last year. Corn prices at the farm are forecast to average \$2.35 to \$2.55, compared to \$2.50 in 1981/82. Of course, weather conditions through harvest and other factors could cause production to differ from August 1 estimates.

The 1982 soybean crop was forecast at a record of 2.3 billion bushels, up 13 percent from 1981. Soybean stocks on September 1, the start of the 1982/83 marketing year,

are expected to be down around 48 million bushels from a year earlier, but with increased production this fall, soybean supplies for 1982/83 will rise about 9 percent.

With larger supplies of soybeans and an anticipated 6-percent increase in domestic crushing, soybean meal prices during 1982/83 may average \$5 to \$35 a ton below the \$185 estimated for 1981/82.

Production costs for broilers, turkeys, and eggs have declined this year, mostly because of weak corn and soybean meal prices. Estimated feed cost for producing a dozen Grade A large eggs during July was 31 cents, down 5 cents from July 1981. Broiler feed costs were 17.6 cents a pound, down 3 cents, and the cost for turkey, at 25.4 cents, was off nearly 6 cents a pound. These estimated costs of production are based on corn and soybean meal prices lagged 1 month for eggs, 2 months for broilers, and 3 months for turkeys.

## EGGS

Egg production is expected to stay about 1 percent below a year earlier during the balance of 1982, but it may about equal year-earlier levels in the first half of 1983. Egg prices will rise seasonally during September-November but average below a year ago during the last half of the December 1981-November 1982 marketing year.

### First-Half Egg Production Down

Egg output during December 1981-May 1982 totaled 2.9 billion dozen, down 1 percent from a year earlier. All of the decline was due to a smaller laying flock, since the rate of lay was up slightly in the first quarter and equaled last year's rate in the second quarter.

The decline in the laying flock was much smaller than the decline in replacement pullets would have suggested. During June-November 1981, the period which provides pullets for first-half 1982, the egg-type hatch was 8 percent below the same period in 1980. However, producers were able to maintain flock numbers by delaying culling and recycling a larger number of hens. During December-May, light-type slaughter was 4 percent below 1981. In addition, about 19 percent of the hens (as

reported on December 1, January 1, February 1, March 1, and June 1) had been force molted into an additional laying cycle.

### Second-Half Production Also Down

Egg producers are expected to continue delaying culling of their old hens to maintain only slightly reduced

**Table 2—Layers on farms and eggs produced**

Marketing year quarters <sup>1</sup>	Number of layers		Eggs per layer		Eggs produced	
	1981	1982	1981	1982	1981	1982
	<i>Mil.</i>		<i>No.</i>		<i>Mil. doz.</i>	
I	293	290	59.7	59.9	1,454.9	1,449.5
II	285	283	61.6	61.6	1,462.8	1,450.6
III	282		60.9		1,432.1	
IV	288		60.5		1,450.5	
Annual	287		242.6		5,800.3	

**Table 3—Egg type chick hatchery operations**

Month	Hatch			Eggs in incubators first of month		
	1980	1981	1982	1980	1981	1982
	<i>Thousand</i>			<i>Percent</i>		
January	38,090	37,792	35,962	97	97	98
February	42,082	36,051	35,483	103	93	103
March	46,464	44,489	43,812	89	95	99
April	47,883	48,258	46,185	88	97	94
May	47,610	46,100	46,505	87	91	102
June	42,293	40,524	39,003	84	93	98
July	37,892	32,257	34,619	88	84	107
August	38,001	33,796		91	82	98
September	37,401	32,250		99	82	
October	37,286	35,905		91	94	
November	33,785	33,699		93	92	
December	35,835	33,054		97	96	

**Table 4—Force moltings and light-type hen slaughter, 1980-82**

Month	Forced molt layers <sup>1</sup>						Light-type hens slaughtered under federal inspection		
	Being molted			Molt completed					
	1980	1981	1982	1980	1981	1982	1980 <sup>2</sup>	1981 <sup>2</sup>	1982
	<i>Percent</i>			<i>Percent</i>			<i>Thousand</i>		
January	2.2	3.4	3.2	14.0	18.0	19.8	19,092	18,091	13,923
February	3.6	3.6	4.3	14.0	16.5	18.8	18,813	15,210	12,487
March	3.6	3.6	3.6	13.5	15.6	18.6	16,214	17,825	14,659
April	3.2	3.7	N.A.	13.0	15.5	N.A.	18,090	16,753	16,141
May	5.3	5.7	N.A.	11.8	15.2	N.A.	14,348	13,680	13,913
June	5.4	7.4	N.A.	14.2	14.9	N.A.	12,212	13,287	13,860
July	4.4	4.6	N.A.	14.5	17.6	N.A.	11,235	11,090	
August	4.6	3.5		16.0	18.3		10,016	12,459	
September	3.9	3.8		16.5	17.6		10,993	11,259	
October	4.7	4.6		16.2	18.4		14,507	11,369	
November	4.8	4.8		16.8	18.9		9,978	9,136	
December	2.8	2.4		17.9	19.1		13,775	13,294	

<sup>1</sup>Percent of hen and pullets of laying age in 17 selected states. <sup>2</sup>Revisions include data from late reports or other corrections developed by the Federal Safety Inspection Service. N.A. not available.

**Table 5—Shell eggs broken and egg products produced under federal inspection, 1981-82**

Period <sup>1</sup>	Shell eggs broken	Egg products produced <sup>2</sup>		
		Liquid <sup>3</sup>	Frozen	Dried
	Thou. doz.	Thou. lbs.	Thou. lbs.	Thou. lbs.
<b>1981</b>				
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
Apr. 19 - May 16	60,458	36,457	27,217	6,469
May 17 - June 13	60,007	35,472	28,031	6,580
June 14 - July 11	60,613	36,749	31,197	6,843
July 12 - Aug. 8	62,386	36,749	27,913	6,864
Aug. 9 - Sept. 5	57,320	35,703	25,672	5,912
Sept. 6 - Sept. 30	49,928	34,607	21,118	5,035
Oct. 1 - Oct. 31	58,030	39,652	28,513	6,826
Nov. 1 - Nov. 28	50,348	32,800	23,477	5,801
Nov. 29 - Dec. 26	50,507	32,296	24,280	6,051
Dec. 27 - Jan. 23	51,158	30,793	24,126	5,341
<b>1982</b>				
Jan. 24 - Feb. 20	47,113	31,062	22,938	5,012
Feb. 21 - Mar. 20	51,265	31,360	25,890	5,074
Mar. 21 - Apr. 17	53,773	31,880	24,690	5,816
Apr. 18 - May 15	59,705	39,064	28,367	6,415
May 16 - June 12	64,889	40,072	29,003	7,975
June 13 - July 10	60,166	37,764	27,298	6,540

<sup>1</sup>Weeks in 1981 and 1982. <sup>2</sup>Includes ingredients added. <sup>3</sup>Liquid egg product produced for immediate consumption and for processing.

output during the remainder of the year, because replacement pullets will remain at low levels. During December-June, the hatch of layer-type chicks was below a year earlier every month except May. As these pullets enter the laying flock in 5 to 6 months, replacement layers for June-August will be down almost 4 percent from last year and for September-November down 2 percent.

The long period of negative returns during 1980 and 1981 has made producers cautious about expanding, especially when interest rates are high. Producers' returns likely will turn positive as demand rises seasonally in September-November and through the first half of 1983. Producers will continue to keep hens in the flock longer, and the replacement hatch may well continue near last year's low level.

### Egg Prices To Stay Weak

During December-May, New York wholesale prices for Grade A large cartoned eggs averaged 75 cents per dozen, 1 cent above the second half of 1981 and 2 cents above a year earlier. Reduced supplies plus export demand, especially in the first quarter, strengthened prices. However, egg prices have been weak this summer, probably in response to a sharp drop in export demand and the sluggish general economy. Cartoned Grade A large eggs in New York averaged 64 cents per dozen in July. Prices weakened in mid-July and remained weak through mid-August, then strengthened in anticipation of the seasonal rise in September. During June-August, prices averaged 64 cents per dozen.

Egg prices should strengthen during September-November as the new school year begins and as holiday baking picks up toward the end of the period. Prices in

the fourth quarter of the marketing year are expected to average 70 to 74 cents per dozen, down from 77 cents last year. If the economy improves and unemployment declines, prices may average 72 to 76 cents per dozen during the first half of the 1983 marketing year.

### Domestic Use Even, Exports Down

Consumption of shell eggs and egg products (shell equivalent) during December-May totaled 132 eggs per person, nearly the same as the 133 consumed last year. Although production was down, the decrease was offset by a decline in exports, military purchases, and hatching use. During December-May 1981/82, 3 percent of the eggs produced were exported compared with 4 percent during the same period a year before.

Egg exports through the first half of the year lagged well behind a year ago. Much of the decline resulted from the strong dollar and a decline in the world economy. Exports of shell eggs and egg products (shell equivalent) totaled 78 million dozen, down 30 percent from January-June 1981. Exports of egg products declined 23 percent; shell eggs other than hatching eggs were off 44 percent; and hatching eggs declined 15 percent. Egg products represented 55 percent of the total (shell equivalent) eggs exported. Japan continues as the largest importer of U.S. eggs, and most of these were in the form of egg products. Shipments of eggs to U.S. territories (Puerto Rico and the Virgin Islands) increased 11 percent to 12.1 million dozen.

### Breaking Use Up Seasonally

Eggs processed under Federal inspection usually increase seasonally in the summer months because of reduced shell egg demand. Eggs broken commercially increased 4 percent in May to 64 million dozen, up from 62 million in May 1981. Weekly processing reports indicate breaking in June and July will be above last year. With the decline in export demand, prices of egg products are below last year.

**Table 6—U.S. egg exports to major importers April-June 1981-82<sup>1</sup>**

Country or Area	1981	1982
	1,000 Dozen	
Japan	23,407	14,920
Hong Kong	1,871	3,721
Canada	2,772	2,834
Federal Rep of Germany	1,929	2,135
Venezuela	1,457	1,059
Trinidad-Tobago	660	897
Jamaica	547	646
Mexico	2,258	431
United Kingdom	1,203	410
Netherlands	426	398
United Arab Emirates	544	363
Egypt	1,272	193
Switzerland	621	190
Colombia	141	190
Netherlands Antilles	69	190
Other	18,738	1,847
Total	57,913	30,425

<sup>1</sup>Shell and shell equivalent of egg products.

**Table 7—Egg prices and price spreads, 1981-82**

Item	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
<b>Farm Price</b>													
	<i>Cents per dozen</i>												
1981	64.8	62.3	60.5	63.9	56.1	56.6	58.6	59.7	64.8	63.7	70.1	65.6	62.3
1982	63.5	66.3	68.2	63.0	54.8	51.6	55.2						
<b>New York (cartoned)*</b>													
<b>Grade A, Large</b>													
1981	75.6	71.3	71.0	73.4	66.8	67.1	71.8	73.3	74.7	75.7	81.9	76.0	73.2
1982	81.4	77.7	79.4	72.2	64.0	63.9							
<b>4-Region Average, Grade A, Large</b>													
<b>Retail Price</b>													
1981	93.7	92.8	88.2	90.9	84.1	85.2	86.9	87.4	93.0	91.7	95.7	98.0	90.6
1982	93.9	101.1	96.7	92.3	85.3	80.5							
<b>Price Spreads</b>													
<b>Farm-to-Consumer</b>													
1981	37.2	39.4	36.5	35.1	35.6	36.6	34.7	33.2	36.9	34.7	32.7	40.5	36.1
1982	32.3	42.8	35.7	40.6	40.6	34.6							
<b>Farm-to-Retailer</b>													
1981	18.8	19.6	19.1	19.9	17.9	18.8	18.5	18.1	20.8	19.1	19.4	20.5	19.2
1982	17.7	21.4	18.8	22.5	20.5	17.2							
<b>Retail</b>													
1981	18.4	19.8	17.4	15.2	17.7	17.8	16.2	15.1	16.1	15.6	13.3	20.0	16.9
1982	14.6	21.4	16.9	18.1	20.1	17.4							
	1967 = 100												
<b>Consumer Price Index</b>													
1981	190.2	188.2	180.5	184.3	170.5	172.1	174.2	177.6	188.8	185.9	194.7	198.0	183.8
1982	189.4	205.1	195.2	186.9	172.3	162.5	173.6						

\* Price to volume buyers.

**Table 8—Shell eggs: Supply and utilization, 1980-82**

Marketing Year and quarter <sup>1</sup>	Stocks change <sup>2</sup>	Production	Hatching use	Eggs broken	Imports	Total supply	Exports and shipments	Domestic disappearance		
								Military	Civilian	
									Total	Per Capita
<i>Million dozen</i>										
<i>Number</i>										
1980										
I	.5	1,475.4	125.5	168.6	2.1	1,183.9	21.9	5.5	1,156.6	61.8
II	-.9	1,455.7	130.5	175.5	1.0	1,149.9	18.4	5.3	1,126.2	60.1
III	.4	1,420.0	120.2	194.3	1.8	1,107.6	23.5	5.8	1,078.3	57.3
IV	.2	1,456.0	121.2	181.0	1.9	1,155.9	35.6	5.1	1,115.3	59.1
Year	.2	5,807.1	497.4	719.4	6.9	4,597.4	99.4	21.6	4,476.3	238.4
1981										
I	0	1,454.9	128.0	175.1	-.9	1,150.9	36.2	5.4	1,109.4	58.7
II	-.3	1,462.8	135.2	184.9	1.3	1,143.7	27.5	5.6	1,110.6	58.6
III	.7	1,432.1	123.8	200.4	2.4	1,110.9	31.8	5.6	1,073.5	56.5
IV	-.5	1,450.5	119.4	172.4	.5	1,158.7	39.9	5.9	1,112.8	58.5
Year	-.1	5,800.3	506.3	732.8	3.2	4,564.2	135.4	22.5	4,406.3	232.4
1982										
I	-.1	1,449.5	125.9	159.5	.2	1,164.1	30.6	5.8	1,127.7	59.1
II	.2	1,450.6	133.5	186.1	-1.1	1,130.1	22.3	4.1	1,103.7	57.7

<sup>1</sup>Year beginning December 1. <sup>2</sup>Stock change based on calendar year.

**Table 9—Total eggs: Supply and utilization by quarters, 1980-82<sup>3</sup>**

Marketing year and quarter <sup>1</sup>	Supply					Utilization					
	Production	Imports <sup>2</sup>	Beginning Stocks <sup>2</sup>	Total supply	Ending stocks <sup>2</sup>	Exports and shipments <sup>2</sup>	Domestic disappearance				
							Eggs used for hatching	Military <sup>2</sup>	Civilian <sup>1</sup>		
									Total	Per capita	
<i>Million dozen</i>										<i>Number</i>	
1980											
I	1,475.4	2.1	18.9	1,478.0	18.4	33.0	125.5	6.1	1,313.5	70.2	
II	1,455.7	1.1	18.4	1,451.9	23.2	36.3	130.3	5.7	1,279.4	68.2	
III	1,420.0	1.8	23.2	1,421.3	23.7	41.5	120.2	6.5	1,253.1	66.6	
IV	1,456.0	2.0	23.7	1,462.3	18.9	51.2	121.2	5.7	1,284.2	68.1	
Year	5,807.1	7.0	18.9	5,813.6	18.9	161.9	497.4	24.0	5,130.2	273.2	
1981											
I	1,454.9	-.9	19.4	1,455.5	17.9	56.2	128.0	5.6	1,265.6	67.0	
II	1,462.8	1.3	17.9	1,462.4	19.6	61.7	135.2	6.1	1,259.3	66.5	
III	1,432.1	2.5	19.6	1,434.3	19.9	57.7	123.8	6.1	1,246.8	65.7	
IV	1,450.5	.5	19.9	1,453.4	17.5	74.0	119.4	6.6	1,253.5	65.9	
Year	5,800.3	3.4	19.4	5,805.6	17.5	249.6	506.3	24.4	5,025.3	265.0	
1982											
I	1,449.5	.2	17.5	1,452.8	14.4	55.1	125.9	6.8	1,265.0	66.3	
II	1,450.6	-1.1	14.4	1,445.7	18.2	44.9	133.5	4.5	1,262.7	66.1	

<sup>1</sup>Year beginning December 1. <sup>2</sup>Shell eggs and the approximate shell-egg equivalent of egg product. <sup>3</sup>Calculated from unrounded data.

**Table 10—Mature chicken supply and utilization, 1980-82**

Quarters and years	Supply					Utilization					
	Production	Beginning stocks	Total supply	Ending stocks	Exports and shipments	Domestic disappearance					
						Military	Civilian				
							Total	Per capita*			
<i>Million pounds</i>										<i>Pounds</i>	
1980											
I	233.3	111.5	344.8	117.9	6.5	.9	219.5	1.0			
II	199.4	117.9	317.3	132.4	16.2	0	168.6	.8			
III	141.4	132.4	273.8	123.4	14.5	0	135.9	.6			
IV	177.5	123.4	300.8	114.1	22.2	0	164.5	.7			
Year	751.6	111.5	863.1	114.1	59.5	.9	688.6	3.1			
1981											
I	214.5	114.1	328.6	126.4	16.1	.7	185.5	.8			
II	203.0	126.3	329.3	147.2	9.1	.4	172.7	.8			
III	169.5	147.2	316.7	146.2	7.5	.5	162.5	.7			
IV	170.1	146.2	316.3	116.5	13.5	.3	186.1	.8			
Year	757.1	114.1	871.2	116.5	46.2	1.8	706.8	3.1			
1982											
I	191.4	116.5	307.9	113.0	7.4	.4	187.1	.8			
II	201.3	113.0	314.3	107.9	7.2	1.1	198.1	.9			

\*Calculated from unrounded data.

**Table 11—U.S. mature chicken exports to major importers April-June 1981-82**

Country or Area	1981	1982
	<i>1,000 Pounds</i>	
Nigeria	970	2,174
Canada	3,628	2,064
Japan	705	547
Mexico	377	539
French Pacific Is.	1,084	484
Trust Terr. of Pacific Is.	229	238
Colombia	63	128
Singapore	0	82
Netherlands Antilles	101	68
Hong Kong	18	39
Haiti	0	38
Ghana	0	37
Bahamas	16	25
Bermuda	15	19
Western Samoa	0	17
Other	1,261	54
Total	8,468	6,551

## MATURE CHICKENS SLAUGHTER

Mature chickens (over 6 months old) slaughtered under Federal inspection during April-June 1982 numbered 53 million, 1 percent less than last year. Slaughter of heavy-type chickens (primarily from broiler-breeder flocks) totaled 9 million head, down 9 percent from 1981. These equaled 84 percent of the pullets placed 14 months earlier. Preliminary weekly slaughter reports during July showed that almost 3 million heavy birds were killed, down 1 percent from last year.

During April-June, slaughter of light-type chickens (primarily from flocks producing table eggs) numbered 43 million head, down 1 percent from 1981. Delayed culling, combined with earlier cutbacks in replacement pullets, is reducing the number of light-type chickens slaughtered. Based on preliminary weekly reports, slaughter during July was about 4 percent above last year. Weak egg prices during June and late July likely encouraged producers to cull more heavily.

During the rest of 1982, meat production from mature chickens will likely be lower than in 1981. Earlier reductions in the number of light-type chicks hatched and expected delayed culling of the current laying flock will likely reduce output. The slaughter of heavy-type chickens will likely be down, because replacement pullets were reduced and the flock size is expected to be below last year. If producers delay culling to obtain more hatching eggs, slaughter will be even lower.

## AMS To Buy Chicken Patties

On August 20, USDA announced plans to buy frozen, fried, batter-breaded patties prepared from fowl (mature chickens). The patties are to be used in school lunches and other domestic food programs. First offers are due in Washington, D.C., by September 7 and subsequent offers by every other Tuesday until further notice.

USDA indicated that terms of contracts to be awarded the week of October 4 and thereafter will require the use of hens slaughtered not earlier than 30 days prior to the date of a contract. Presently, hens may have been slaughtered up to 12 months prior to the date of contract.

During August-September 1981, USDA purchased 3.9 million pounds of patties, equivalent to 6.3 million pounds of ready-to-cook fowl, at a delivered cost of \$4.9 million.

## BROILERS

Broiler meat output will likely be at record levels during the balance of 1982 and into 1983, but the year-to-year increase will narrow from 3 percent in the third quarter to 2 percent in both fourth-quarter 1982 and first-quarter 1983. Larger broiler output combined with reduced exports and the weak economy, but smaller red meat supplies, will likely hold broiler prices near year-earlier averages.

## Record Output To Continue

Production of broiler meat during the first 6 months of 1982 totaled 5,990 million pounds, up about 1 percent

**Table 12—Broiler chicks hatched and pullet chicks placed in hatchery supply flocks**

Month	Broiler-type chicks hatched		Pullet chicks placed in broiler hatchery supply flocks				
	1981 <sup>1</sup>	1982	Monthly placements		Cumulative placements 7-14 months earlier		
			1981	1982	1981	1982	1983
	<i>Million</i>		<i>Thousand</i>		<i>Thousand</i>		
January	369.5	372.3	3,523	3,171	26,098	28,513	25,971
February	344.2	335.6	3,553	3,012	26,699	28,228	25,994
March	399.4	390.0	4,119	3,489	26,465	27,217	
April	389.7	384.4	3,499	3,476	26,486	27,155	
May	402.3	401.2	3,093	3,537	27,087	26,931	
June	382.7	384.2	3,280	2,827	27,322	25,760	
July	374.2	381.2	3,066	2,971	27,819	25,772	
August	365.1		3,084		28,035	25,850	
September	350.2		3,461		28,237	25,582	
October	342.3		3,329		28,879	26,005	
November	332.3		2,948		29,380	26,397	
December	364.6		3,511		29,116	26,473	

<sup>1</sup>Revised.

**Table 13—Broiler: Eggs set and chicks placed weekly in 19 commercial States, 1980-82**

Period month and day <sup>1</sup>	Eggs set			Chicks placed		
	1980/81	1981/82	Percent of previous year	1980/81	1981/82	Percent of previous year
	<i>Thousands</i>	<i>Thousands</i>	<i>Percent</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Percent</i>
November						
21	96,862	99,465	103	77,795	77,258	99
28	96,236	98,559	102	76,149	78,230	103
December						
5	90,472	92,499	102	76,964	79,772	104
12	95,325	98,069	103	77,511	79,350	102
19	97,440	99,055	102	76,598	78,692	103
26	97,408	98,190	101	72,351	74,155	102
January						
2	97,239	97,744	101	76,262	77,961	102
9	98,749	99,412	101	77,909	79,130	102
16	99,309	99,631	100	77,785	78,969	102
23	100,838	99,394	99	78,191	78,577	100
30	100,686	98,033	97	78,892	80,393	102
February						
6	100,411	97,714	97	79,756	80,271	101
13	102,905	99,557	97	80,413	79,348	99
20	104,288	100,903	97	80,920	78,451	97
27	105,391	103,708	98	80,633	79,290	98
March						
6	105,186	103,338	98	82,811	80,939	98
13	104,273	103,514	99	83,901	81,918	98
20	104,054	103,579	100	84,646	83,705	99
27	105,290	103,120	98	85,001	84,342	99
April						
3	104,952	102,770	98	84,408	83,907	99
10	105,261	104,946	100	83,848	83,891	100
17	105,403	105,098	100	84,865	83,478	98
24	104,555	103,328	99	85,045	83,568	98
May						
1	104,474	102,633	98	85,052	85,342	100
8	104,360	104,047	100	85,517	85,582	100
15	104,672	103,263	99	84,259	84,628	100
22	103,455	103,425	100	84,953	83,455	98
29	103,815	103,333	100	84,390	85,728	102
June						
5	102,676	103,318	101	84,777	84,256	99
12	102,141	102,934	101	84,321	84,679	100
19	102,530	103,105	101	83,587	84,041	101
26	98,515	99,452	101	83,055	84,883	102
July						
3	96,910	96,730	100	82,742	84,314	102
10	99,851	100,743	101	82,342	84,961	103
17	99,052	99,899	101	78,227	79,936	102
24	98,903	100,960	102	77,411	78,107	101
31	97,290	99,496	102	79,428	81,855	103
August						
7	97,035	97,762	101	78,511	81,286	104
14	98,074	98,402	100	77,728	82,009	106
21	98,402	97,482	99	76,577	79,926	104
28	98,159			76,690		
September						
4	95,004			78,364		
11	91,843			78,336		
18	86,107			78,491		
25	94,068			75,701		
October						
2	94,860			73,097		
9	91,013			67,763		
16	81,355			75,071		
23	89,757			75,208		
30	97,283			72,312		
November						
6	97,212			63,297		
13	99,067			70,846		

<sup>1</sup>Weeks in 1981/82 and corresponding weeks in 1980/81.

**Table 14—Federally inspected young chicken slaughter**

Quarter and year	Number	Average weight	Liveweight pounds	Certified RTC
	<i>Mil.</i>	<i>Lbs.</i>	<i>Mil. lbs.</i>	<i>Mil. lbs.</i>
1980				
I	957	3.97	3,803	2,755
II	1,037	3.98	4,125	2,992
III	998	3.85	3,840	2,792
IV	937	4.02	3,763	2,734
Year	3,929	3.95	15,531	11,272
1981				
I	977	4.02	3,931	2,849
II	1,069	3.98	4,259	3,096
III	1,061	3.98	4,220	3,081
IV	969	4.07	3,939	2,880
Year	4,076	4.01	16,350	11,906
1982				
I	981	4.00	3,920	2,887
II	1,043	4.05	4,226	3,099

from the same period in 1981. Numbers were down 1 percent, so all of the increase was from heavier weights, 4.03 pounds per bird slaughtered, up 1.5 percent.

Broiler meat output is expected to remain at record levels in coming months despite negative profit margins. Broiler slaughter in July-December is expected to exceed last year's record 5,961 million pounds (ready-to-cook) by around 160 million pounds.

Weekly reports of broiler slaughter and chick placements suggest that July-September broiler output will be up about 2 percent from the previous quarter and up 3 percent from a year earlier. Despite prospects for negative profit margins in the fall, broiler production is expected to be up about 2 percent. However, to reach this level, producers may have to delay culling of their hatchery flocks because supplies of hatching eggs will be tighter than a year ago. Cumulative pullet placements will be 8 percent below last year in the third quarter and 10 percent below in the fourth. If hatching egg exports continue weak, broiler eggs not exported can be used for domestic production.

### Prices To Decline Seasonally

Broiler prices have not increased recently as have pork and beef prices. The weak economy and high unemployment have probably hurt demand and weak exports have further increased domestic supplies.

The weighted average price of broilers in 9 cities was 45 cents per pound in the second quarter, down from 46 cents last year. During July, prices averaged 46 cents per pound, 4 cents below a year ago. Since broiler prices are usually stronger in July than the remainder of the third quarter, prices are expected to average 42 to 44 cents during July-September, down from 47 cents last year. Prices are usually seasonally weak during the fourth quarter and are expected to average in the low 40's, near last year's 42 cents.

### Young Chicken Exports Fall Sharply

U.S. exports of young chickens (primarily broilers) and chicken parts during the first 6 months of 1982 totaled 277 million pounds, down from 370 million in 1981.

Exports of whole chickens were down 60 percent but chicken parts were up 3 percent. Japan was the largest importer, taking 65 million pounds, off from 71 million during first-half 1981. Singapore was the second largest importer with 36 million pounds, up from 23 million. Both Japan and Singapore took mostly chicken parts. During first-half 1981, Egypt and Iraq were large importers, but this year Iraq has made no purchases and Egypt is down 99 percent.

Shipments of young chicken and parts to U.S. territories through June totaled 73 million pounds, down from 77 million in the first half of 1981.

### Broiler Prospects More Favorable For 1983

The outlook for the broiler industry is more favorable for early 1983 than a year ago. Demand should pick up as the economy improves and unemployment declines. Export demand is expected to stabilize near this year's level.

Total competing meat supplies will be down slightly in 1983. Beef production is expected to be down 1 percent with all of the decline in nonfed steers and heifers slaughter. Fed beef production is expected to increase slightly. Pork production is expected to increase about 1 percent, with all the gain coming in the second half.

The record corn and near-record soybean crops forecast for this fall are expected to provide plentiful feed supplies at moderating prices during 1983. Production costs other than feed are likely to increase; therefore, total costs may be little changed from this year.

Producers have been reducing pullet replacement numbers for the hatchery supply flock most of this year, so additional hatching eggs early in 1983 will depend upon delayed culling of old hens. Also, producers' prices will likely be below current costs of production during the remainder of 1982, which will not encourage expansion. These factors suggest a small increase in production for 1983—possibly 2 percent above this year. With a limited increase in production and a weak economic recovery, the weighted average price of broilers in 9 cities is expected to be 46 to 50 cents per pound in first-half 1983 and 45 to 49 cents in the second half.

**Table 15—U.S. young chicken exports to major importers April-June 1981-82**

Country or Area	1981	1982
	<i>1,000 Pounds</i>	
Japan	40,927	36,040
Singapore	12,772	17,934
Jamaica	12,070	16,898
Hong Kong	12,481	15,658
Nigeria	0	9,922
Mexico	8,985	9,740
Leeward-Windward Is.	6,383	7,429
Netherlands Antilles	3,373	4,081
Canada	3,112	3,330
Canary Islands	2,750	2,244
French Pacific Is.	1,522	1,879
Federal Rep of Germany	49	1,736
Barbados	1,057	1,631
Netherlands	749	1,310
Venezuela	11,450	1,268
Other	99,851	19,098
Total	217,532	140,197

**Table 16—Young chicken prices and price spreads, 1981-82**

Item	January	February	March	April	May	June	July	August	September	October	November	December	Average
<i>Cents per pound</i>													
<b>Farm Price *</b>													
1981	30.4	30.5	29.2	26.6	28.2	29.9	30.1	28.5	26.3	26.0	25.4	24.6	28.0
1982	27.1	27.0	26.9	26.2	28.0	28.6	28.6						
<b>Wholesale RTC</b>													
<b>9-City Average</b>													
1981	49.5	50.3	48.2	44.4	46.3	49.3	50.2	47.3	43.6	43.7	42.5	40.1	46.3
1982	45.2	44.5	44.8	42.6	45.8	47.0	46.1						
<b>4-Region Average</b>													
<b>Retail Price</b>													
1981	75.4	76.5	75.9	73.7	70.9	72.1	77.3	75.7	73.4	71.9	70.7	70.8	73.7
1982	71.7	72.8	71.7	71.3	72.2	73.4							
<b>Price Spreads</b>													
<b>Farm-to-Consumer</b>													
1981	34.5	35.4	37.4	37.1	32.5	31.0	37.1	37.6	38.8	37.0	36.2	38.2	36.1
1982	35.7	37.8	36.5	36.1	34.1	33.4							
<b>Farm-To-Retailer</b>													
1981	15.1	16.6	17.4	15.6	15.2	14.9	17.4	16.9	17.4	16.3	15.1	16.4	16.2
1982	16.8	17.9	17.1	15.0	14.6	14.0							
<b>Retail</b>													
1981	19.4	18.8	20.0	21.5	17.3	16.1	19.7	20.7	21.4	20.7	21.1	21.8	19.9
1982	18.9	19.9	19.4	21.1	19.5	19.4							
<i>1967 = 100</i>													
<b>Retail Price Index</b>													
<b>Whole Chickens</b>													
1981	202.5	207.0	203.1	198.0	190.3	193.8	206.9	201.4	197.3	194.0	190.9	190.1	197.9
1982	193.1	196.3	195.1	194.1	196.8	199.1	201.2						

\* Liveweight.

**Table 17—Young chicken supply and utilization, 1980-82**

Quarter and Year	Total Production <sup>1</sup>	Beginning stocks	Total supply <sup>2</sup>	Ending stocks	Exports and shipments	Military	Civilian disappearance	
							Total	Per capita
							<i>Million pounds</i>	
							<i>Pounds</i>	
<b>1980:</b>								
I	2,777.9	30.6	2,808.5	31.2	138.6	7.8	2,630.9	11.7
II	3,016.4	31.2	3,047.6	34.7	194.8	11.2	2,806.9	12.5
III	2,810.8	34.7	2,845.5	26.8	181.6	9.7	2,627.4	11.6
IV	2,752.1	26.8	2,778.9	22.4	206.6	8.6	2,541.3	11.2
Year	11,357.3	30.6	11,387.9	22.4	721.6	37.3	10,606.5	47.0
<b>1981</b>								
I	2,869.7	22.4	2,892.1	24.8	191.5	7.1	2,668.7	11.8
II	3,114.6	24.8	3,139.4	30.1	255.4	9.4	2,844.5	12.5
III	3,100.1	30.1	3,130.2	31.5	204.5	10.0	2,884.2	12.6
IV	2,896.6	31.5	2,928.1	32.6	222.1	7.8	2,665.6	11.7
Year	11,980.9	22.4	12,003.3	32.6	873.5	34.3	11,062.9	48.6
<b>1982</b>								
I	2,906.9	32.6	2,939.5	27.0	171.3	6.8	2,734.4	11.9
II	3,120.2	27.0	3,147.3	21.6	178.7	9.9	2,937.1	12.8

<sup>1</sup>Total production is estimated by multiplying the federally inspected slaughter by the ratio of the annual total production to the annual federally inspected slaughter. The ratio for 1982 is the same as the one for 1981. <sup>2</sup>Totals may not add due to rounding.

### USDA Purchases Young Chicken

On July 22, USDA announced plans to buy ready-to-cook cut-up chicken, whole chicken, and thighs and drumsticks for school lunch and other domestic food programs. As of August 25, some 6.0 million pounds of

fresh-frozen cut-up chicken costing \$3.2 million, 216,000 pounds of bulk pack whole chicken costing \$99,000, and 1.1 million pounds of thighs and drumsticks costing \$537,000 had been purchased. First offers were received on August 6 and offers were invited for every other Friday until further notice.

**Table 18—Turkey hatchery operations, 1981-82**

Month	Poults hatched						Eggs in incubators first of month changes from previous year					
	Light breeds <sup>1</sup>		Heavy breeds <sup>2</sup>		Total		Light breeds <sup>1</sup>		Heavy breeds <sup>2</sup>		Total	
	1981	1982	1981	1982	1981	1982	1981	1982	1981	1982	1981	1982
	<i>Thousands</i>						<i>Percent</i>					
January	1,253	631	14,368	12,734	15,621	13,365	-11	-50	2	-9	1	-12
February	1,014	812	15,512	13,787	16,526	14,599	-26	-21	1	-11	-1	-12
March	1,034	732	18,872	17,443	19,906	18,175	-30	-28	-3	-13	-5	-14
April	1,001	834	19,577	20,386	20,578	21,220	-36	-25	-3	-2	-6	-3
May	1,085	754	21,144	19,527	22,229	20,281	-29	-22	4	-6	2	-7
June	1,066	784	20,390	19,714	21,456	20,498	-37	-36	5	-11	2	-12
July	951	994	17,703	19,268	18,654	20,262	-46	-12	5	1	1	0
August	844		11,837		12,681		-38	-8	8	4	3	3
September	415		7,793		8,208		-60		-5		-11	
October	363		9,199		9,562		-73		2		-7	
November	555		9,343		9,898		-54		-4		-9	
December	814		11,201		12,015		-45		-5		-9	

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

## TURKEYS

Second-half 1982 turkey meat supplies will likely be below the record levels of a year ago. Smaller turkey supplies, combined with sharply reduced pork production and only a modest increase in beef and broiler output, will probably push turkey prices much higher than last year.

### Turkey Output To Decline Slightly

Turkey meat output will be smaller than a year earlier during July-December because producers reacted to low returns and reduced the poult hatch. Turkey production in federally inspected slaughter plants during the first 6 months of this year totaled 938 million pounds (ready-to-cook), 1 percent below the first half of 1981. The decline would have been even larger if weights had not increased to an average of 19.23 pounds, up from 18.64 in 1981. Birds slaughtered during first-half 1982 were down 5 percent from last year's 64 million. This drop was more than the turkey hatch last fall and winter had indicated but not unusual, since turkeys can be slaughtered from 3.5 to 6 months of age and lights at 3.5 to 4 months. The hatch during September 1981 through February 1982 was down 9 percent, but it was only 5 percent below a year earlier during March-June.

Hatchery activity suggests that a larger percentage than last year of second-half turkey output will be produced for the heavy consumption months of the fourth quarter. Poult hatch numbers indicate that turkey meat output in the third quarter may be down 11 percent. Producers have continued hatching large numbers of turkey eggs through July; in earlier years, the hatch had usually begun to decline by July. Thus, output is expected to be down 1 to 3 percent in the fourth quarter.

### 1982 Turkey Crop Declines

The 1982 turkey crop is expected to total about 164 million head, 4 percent less than in 1981.

Heavy breed turkeys are expected to total about 155

**Table 19—Federally inspected turkey slaughter**

Quarter and year	Number	Average weight	Live weight pounds	Certified RTC
	<i>Mil.</i>	<i>Lbs.</i>	<i>Mil. lbs.</i>	<i>Mil. lbs.</i>
1980				
I	25.9	18.57	481.0	378.6
II	37.2	17.84	664.4	528.3
III	49.4	18.17	897.8	711.6
IV	46.5	19.39	901.8	713.9
Year	159.1	18.51	2,945.1	2,232.4
1981				
I	26.9	18.79	506.4	398.1
II	37.6	18.53	697.5	553.2
III	52.9	18.76	991.6	785.2
IV	48.8	20.00	976.3	772.6
Year	166.3	19.07	3,171.7	2,509.1
1982				
I	26.2	19.66	516.0	405.4
II	34.7	18.91	656.9	524.5

million head, 3 percent less than in 1981. Light breed types declined 25 percent to 9 million head. With this large drop, light breed turkeys accounted for 5 percent of the total, down from 7 percent last year.

Minnesota was the largest producing State this year after slipping to second place last year. By year's end, the State will have raised 27 million turkeys, up 5 percent from 1981. North Carolina ranked second with 26.7 million, down 100,000 head. California was third with 20 million, followed by Arkansas with 13 million and Missouri with almost 12 million.

### Turkey Prices Increase

Turkey prices trended higher during the first half of 1982, following extremely low levels in late 1981. Prices strengthened as stocks of frozen turkey were worked down and output was reduced.

New York wholesale prices for 8- to 16-pound young

hen turkeys averaged 54 cents per pound in January 1982, 5 cents lower than a year earlier. Prices increased to the low 60's by midyear. July prices averaged 64 cents a pound, nearly 3 cents below a year earlier. Prices for young toms have been slightly stronger than for hens and in July averaged 66 cents, off 2 cents from last year. Turkey hen prices are expected to increase in coming months and average 7 to 9 cents per pound above the 59 cents a pound for July-December 1981. Moderate cold storage turkey stocks, lower turkey production, and reduced pork output will strengthen turkey prices through the end of 1982 and into 1983.

### Turkey Stocks Decline

Cold storage turkey stocks on January 1, 1982, were 40 million pounds above a year earlier. However, the August 1 stocks of 336 million pounds were 65 million pounds below a year earlier. Low prices, especially in the first quarter, encouraged increased consumption and exports.

Reduced production in the second half of this year will likely mean reduced yearend turkey stocks from last year. Exports are expected to be down, but the domestic market should be able to handle anticipated supplies at higher prices.

### USDA Begins Turkey Purchase Program

On July 8, USDA announced plans to buy whole turkey and turkey roasts (processed from breasts and thighs) for school lunch and other domestic food programs during 1982-83. As of August 20, USDA had purchased 13.5 million pounds of whole ready-to-cook young turkey at a cost of \$9.2 million, and 4.0 million pounds of ready-to-cook turkey roasts at a cost of \$5.2 million.

**Table 20—U.S. turkey exports to major importers  
April-June 1981-82**

Country or Area	1981	1982
	<i>1,000 Pounds</i>	
Federal Rep of Germany	2,405	2,096
Saudi Arabia	641	1,296
Togo	1,028	1,035
Egypt	6,531	987
Hong Kong	320	873
Nigeria	691	545
Netherlands	350	537
Japan	376	416
Leeward-Windward Is.	197	313
Mexico	68	262
Singapore	26	232
Venezuela	102	231
Trust Terr. of Pacific Is.	103	231
Canada	1,140	230
United Kingdom	675	172
Other	1,427	1,152
Total	16,077	10,609

### Turkey Exports Decline

Turkey meat exports this year were running ahead of last year in the first quarter but declined in the second. Low domestic prices contributed to the increase, but as prices have strengthened exports have declined. Through June, exports were down 1 percent to 28 million pounds. Whole turkey exports declined 23 percent, but cut-up turkeys, which account for 81 percent of the total, increased 6 percent. With domestic prices rising, supplies declining, and the dollar remaining strong, exports of turkey during the balance of 1982 will likely decline and may not reach 1981 levels.

**Table 21—Turkey prices and price spreads, 1981-82**

Item	January	February	March	April	May	June	July	August	September	October	November	December	Average
	<i>Cents per pound</i>												
Farm Price <sup>1</sup>													
1981	40.0	39.0	40.6	38.5	39.2	41.8	42.7	40.2	37.9	33.2	35.6	32.8	38.4
1982	32.6	33.0	33.3	33.9	34.6	37.7	40.0						
New York, Hens <sup>2</sup> 8-16 lbs.													
1981	59.4	60.7	63.8	61.2	63.5	66.2	66.8	61.8	59.5	56.4	57.3	51.7	60.7
1982	53.6	55.8	56.0	55.8	58.8	61.8	64.1						
4-Region Average Retail Price													
1981	97.9	98.1	98.3	95.5	98.8	100.6	102.1	103.0	99.8	97.8	91.6	88.7	97.7
1982	92.8	91.7	91.5	89.5	91.9	91.0							
Price Spreads													
Farm-To-Consumer													
1981	50.2	49.3	46.0	49.1	55.9	46.7	48.2	53.9	53.0	54.1	46.6	50.6	50.3
1982	51.5	47.6	48.6	46.1	45.2	41.3							
Farm-To-Retailer													
1981	23.5	21.5	19.2	24.4	28.8	20.3	20.6	22.3	24.0	24.2	21.9	25.1	23.0
1982	22.2	21.2	19.4	21.2	19.7	19.8							
Retail													
1981	26.7	27.8	26.8	24.7	27.1	26.4	27.6	31.6	29.0	29.9	24.7	25.5	27.3
1982	29.3	26.4	29.2	24.9	25.5	21.5							
	<i>December 1977 = 100</i>												
Consumer price index													
1981	126.7	126.5	127.6	125.9	126.3	128.9	130.0	129.7	129.9	127.2	122.2	120.7	127.3
1982	123.2	123.2	123.9	121.3	124.3	124.6	127.3						

<sup>1</sup>Liveweight. <sup>2</sup>Wholesale, Ready-To-Cook.

**Table 22—Turkey supply and utilization, 1980-82<sup>1, 2</sup>**

Quarter and Years	Production <sup>1</sup>	Beginning stocks	Total supply <sup>2</sup>	Ending stocks	Exports and shipments	Military	Civilian Consumption	
							Total <sup>2</sup>	Per capita <sup>2</sup>
<i>Million pounds</i>								
1980								
I	393.4	240.0	633.4	208.9	13.4	3.7	407.5	1.8
II	549.3	208.9	758.2	286.6	15.7	4.5	451.4	2.0
III	739.6	286.6	1,026.2	398.8	25.9	4.6	596.8	2.7
IV	742.7	398.8	1,141.5	198.0	26.3	3.4	913.9	4.0
Year	2,425.0	240.0	2,665.0	198.0	81.3	16.2	2,369.5	10.5
1981								
I	408.2	198.0	606.2	220.7	12.5	3.5	369.5	1.6
II	567.4	220.7	788.1	327.3	16.4	3.7	440.8	1.9
III	805.7	327.3	1,113.0	532.1	16.8	4.1	579.9	2.5
IV	792.4	532.1	1,324.5	238.4	22.6	3.2	1,060.2	4.6
Year	2,573.7	198.0	2,771.7	238.4	68.3	14.6	2,450.3	10.7
1982								
I	420.5	238.4	658.9	232.8	17.8	2.3	406.0	1.8
II	540.5	232.8	773.4	292.0	10.9	2.2	468.4	2.0

<sup>1</sup>Total production is estimated by multiplying the inspected slaughter by the ratio of the annual total production to the annual inspected slaughter. The ratio used in 1982 is the same as the one in 1981. <sup>2</sup>Totals may not add due to rounding.

**Table 23—Turkeys raised by State, 1981-82<sup>1</sup>**

State	Heavy breeds			Light breeds			Total all breeds		
	1981	1982	1982 as % of 1981	1981	1982	1982 as % of 1981	1981	1982	1982 as % of 1981
	<i>1,000 head</i>		<i>Percent</i>	<i>1,000 head</i>		<i>Percent</i>	<i>1,000 head</i>		<i>Percent</i>
Arkansas <sup>2</sup>							15,070	13,000	86
California	21,768	20,356	94				21,768	20,356	94
Colorado	4,300	4,410	103				4,300	4,410	103
Connecticut	28	9	32				28	9	32
Delaware	178	199	112				178	199	112
Georgia	2,734	2,545	93				2,734	2,545	93
Illinois	407	375	92				407	375	92
Indiana	6,602	6,443	98	9			6,611	6,443	97
Iowa	7,000	7,050	101	90	50	56	7,090	7,100	100
Kansas	263	189	72				263	189	72
Maryland	80	70	88	8	18	225	88	88	100
Massachusetts	145	145	100				145	145	100
Michigan	1,550	1,400	90				1,550	1,400	90
Minnesota	20,000	22,000	110	5,700	5,000	88	25,700	27,000	105
Montana	11,986	11,590	97	14			12,000	11,590	97
Nebraska <sup>2</sup>							680	650	96
New Hampshire	28	22	79				28	22	79
New Jersey	60	60	100	10	12	120	70	72	103
New York <sup>2</sup>							268	247	92
North Carolina <sup>2</sup>							26,800	26,700	100
North Dakota <sup>2</sup>							1,050	950	90
Ohio <sup>2</sup>							2,500	2,500	100
Oklahoma	1,605	1,080	67				1,605	1,080	67
Oregon <sup>2</sup>							1,400	1,155	83
Pennsylvania	4,900	4,775	97	780	320	41	5,680	5,095	90
South Carolina	2,898	2,200	76				2,898	2,200	76
South Dakota <sup>2</sup>							1,500	1,490	99
Texas <sup>2</sup>							7,300	5,100	70
Utah	2,901	2,821	97				2,901	2,821	97
Virginia <sup>2</sup>							10,015	10,081	101
West Virginia <sup>2</sup>							2,149	2,134	99
Wisconsin	6,030	6,400	106	9	6	67	6,039	6,406	106
U.S.	159,184	154,801	97	11,631	8,751	75	170,815	163,552	96

<sup>1</sup>Based on turkeys hatched September 1, 1981 through August 31, 1982. Excludes young turkeys lost. <sup>2</sup>Breakdown by breeds not published to avoid disclosing individual operations.

Of all U.S. customers, the Federal Republic of Germany imported the largest amount (7 million pounds) of U.S. turkey meat during January-June. Its imports, mainly cut-up turkey, were up 38 percent from last year. Nigeria was the second most important buyer during the first half, taking almost 5 million pounds, up from 765,000 pounds last year, although in June Nigeria bought no turkey. Cut-up turkey made up 78 percent of Nigerian imports during the first half. Shipments to U.S. territories during January-June totaled 782,000 pounds. This compared with 799,000 in the same months of 1981.

### Turkey Prospects More Favorable For 1983

Prospects for the turkey industry in 1983 appear much more favorable than this year. The outlook is for slow

growth in the economy, lower carryover stocks of cold storage turkey than a year earlier, about the same supplies of competing meats as in 1982, and nearly the same or only slightly higher production and marketing costs.

Total red meat production during 1983 will be about the same as this year. Output may be down 2 to 3 percent in the first half and up 2 to 3 percent in the second. Beef production may be down 1 percent, with the decline in the second half. Pork production is expected to be up 1 percent if producers expand in the second half.

With favorable returns in the second half of 1982 and plentiful supplies of feed ingredients in prospect, turkey producers may expand production around 7 percent above this year. If the economy expands as expected, turkey prices in 1983 may average 63 to 69 cents per pound, compared to 61-63 in 1982.



## FARMERS' 900 NEWSLINE

Call the FARMERS' — 900 — NEWSLINE for the latest U.S. and world crop, livestock, export, and economic news from USDA. A 60-second summary is available to you 7 days a week, 24 hours a day. Your cost is 50 cents per call. The news items and special features are updated at 4 p.m., Washington, D.C. time.

The FARMERS' — 900 — NEWSLINE keeps you on top of the latest agricultural estimates and analysis from USDA.

# 900-976-0404

**Table 24—Estimated costs and returns, 1980-82<sup>1</sup>**

Quarter and year	Production costs		Wholesale		Net returns
	Feed	Total	Total costs <sup>2</sup>	Price <sup>3</sup>	
			(cts/doz)		
<b>Market eggs</b>					
1980					
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
Year <sup>4</sup>	32.8	49.1	70.4	66.9	-3.5
1981					
I	37.7	54.0	75.3	72.7	-2.6
II	37.3	53.6	74.9	68.8	-6.1
III	35.7	52.0	73.3	72.9	-0.4
IV	30.5	46.8	68.1	78.1	10.0
Year <sup>4</sup>	35.2	51.5	72.8	73.2	0.3
1982					
I	30.3	46.9	68.0	78.9	10.9
II	31.3	47.9	69.0	67.0	-2.0
			(cts/lb)		
<b>Broilers</b>					
1980					
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
Year <sup>4</sup>	17.7	26.1	48.3	46.8	-1.5
1981					
I	21.3	29.7	53.1	49.3	-3.8
II	20.5	28.9	52.1	46.7	-5.4
III	20.2	28.6	51.6	47.0	-4.6
IV	17.8	26.2	48.5	42.1	-6.4
Year <sup>4</sup>	20.0	28.4	51.3	46.3	-5.0
1982					
I	16.7	25.3	47.3	44.8	-2.5
II	17.3	25.9	48.0	45.2	-2.9
			(cts/lb)		
<b>Turkeys</b>					
1980					
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
Year <sup>4</sup>	26.1	37.1	61.0	66.0	5.0
1981					
I	32.0	43.0	68.3	64.2	-4.1
II	30.7	41.7	66.7	67.8	1.1
III	30.6	41.6	66.6	66.5	-0.1
IV	28.5	39.5	63.9	58.6	-5.3
Year <sup>4</sup>	30.2	41.2	66.1	64.0	-2.1
1982					
I	24.1	36.4	60.4	57.0	-3.3
II	25.0	37.3	61.4	59.4	-2.1

<sup>1</sup>Estimated by computerized formula. Costs are weighted by monthly production. <sup>2</sup>Based on farm cost converted to wholesale market value. <sup>3</sup>Wholesale prices used are the 13 metro area egg price, 9-city weighted average broiler price and a composite price reflecting prices in New York, Chicago and Los Angeles. <sup>4</sup>Weighted average.

# ESTIMATING NET RETURNS FOR BROILERS

William L. Henson and Floyd A. Lasley<sup>1</sup>

**ABSTRACT:** The cost-returns series published by ERS shows that net returns for broilers have been negative for several quarters. It is recognized that the series understates average returns as it is based only on whole ice-packed broilers. Sales of parts and further processed items are increasing and these product forms tend to sell at higher prices. Accounting for these products would show higher average prices, costs, and returns. However, trial of an alternative procedure using a blend-of-products price illustrates that it is not feasible to develop a series to show the "true" industry average. Averages of both costs and prices would depend more heavily on allocation procedures, and the resulting series would be more complex and less well understood than the present whole-bird series. Thus, subject to data limitations, when the constraints are considered the current series provides the more meaningful indicator of returns for producing and marketing broilers.

**Keywords:** Broilers, costs, returns, pricing, marketing.

ERS cost and returns series on poultry and eggs have been calculated since 1955, with some modifications over the years for changes in data available and changes in technical coefficients. The purpose of this article is to explain in some detail how the net returns series for broilers is calculated and how its interpretation is constrained by some of its shortcomings—shortcomings that are unavoidable given the absence of more detailed data on cut-up and further processed broilers. Although this article is concerned with the net returns series for broilers, the series for eggs and turkeys are derived by similar methods and constrained by similar limitations.

## Production and Marketing Costs, 1944-71

During the 1950's and 1960's, there were a number of farm management studies and cost surveys for producing and marketing poultry and eggs on commercial farms. As poultry and egg production evolved to specialized commercial enterprises, extension personnel stressed the importance of developing recordkeeping systems. Poultry and egg farm records programs were initiated at several agricultural colleges. The Economic Research Service assembled cost data from many of these sources and supplemented them with data collected from surveys. Yearly data were summarized on a regional basis for eggs, broilers, and turkeys. Regional data, weighted by production levels, were used to calculate U.S. average production and marketing costs at the farm and wholesale marketing levels by year.

Broiler production costs per pound were reported in two categories: (1) feed costs, and (2) other costs, both on a live weight basiswt.). Costs to wholesale included production costs converted to ready-to-cook weight (RTC) plus costs per RTC pound for assembly, processing through the whole bird ice pack level, and delivery to wholesale.

## Production and Marketing Costs, 1972 to Present

In the early 1970's, the procedure used to calculate production and marketing costs was revised. Cost studies and extension service recordkeeping programs which

had provided data for the previous approach were not so readily available. Validation of the series was by industry surveys conducted by ERS. Results of earlier studies were used to estimate sets of relationships which could be computerized to calculate production and marketing cost changes arising from changes in the use of various inputs and in their prices.

The current procedure involves calculating feed costs from monthly average prices for corn (yellow, No. 2, Chicago market) and soybean meal (49-50 percent protein, Decatur). These prices are obtained from various market news reports, although the Chicago corn quote is being discontinued, which will require a new adjustment. Other assumptions and data used in the calculations are listed in table 1. These data, listed by the year in which they apply, are updated periodically according to results of various studies and surveys. In the calculation of feed costs for a given month, ingredient prices, delivery charges, and ration milling charges are lagged 2 months to account for the time lapse between ingredient purchase and product marketing.

## Calculation of Production And Marketing Costs

Broiler production costs at the farm and per pound RTC to the wholesale level for January 1982 and first-quarter 1982 are calculated as follows (data from table 1):

- 1) Obtain prices of soybean meal and corn for November 1981.

soybean meal = \$193.10 per ton  
corn = \$ 2.60 per bushel

<sup>1</sup>Agricultural economists, National Economics Division, Economic Research Service. Henson is stationed at Pennsylvania State University, phone (814) 865-0469.

- 2) Add estimated 1981 charges for delivery of ingredients to producing areas.

$$\begin{aligned} \text{soybean meal} &= 193.10 + 15.70 = \$208.80 \text{ per ton} \\ \text{corn} &= 2.60 + .27 = 2.87 \times 35.7 \text{ bu.} \\ &= 102.46 \text{ per ton} \end{aligned}$$

- 3) Estimate cost of soybean meal and corn per ton of ration. Weight the price per ton of each by its proportion in the ration for 1981 and sum the weighted prices.

$$(.30 \times 208.80) + (.70 \times 102.46) = \$134.36 \text{ per ton of ration.}$$

- 4) Adjust cost of soybean meal and corn per ton of ration to account for other higher average cost ingredients and additives in the ration (1981).

$$1.09 \times 134.36 = \$146.45 \text{ per ton of ration}$$

- 5) Obtain total cost per ton of ration by adding estimated 1981 milling charges to ingredient costs.

$$146.45 + 12.24 = \$158.69 \text{ per ton of ration. Feed cost per pound of ration} = \$158.69 \div 2000 = 7.9$$

- 6) Calculate feed cost per Lwt. pound of broilers by multiplying feed conversion rate times feed cost per pound of ration.

$$2.08 \times 7.9 = 16.4 \text{ per Lwt. pound of broiler}$$

- 7) Calculate total production costs per Lwt. pound by adding estimated nonfeed costs per pound to feed cost per pound.

$$16.4 + 8.6 = 25.0 \text{ per Lwt. pound of broilers}$$

- 8) Convert total production costs from Lwt. basis to RTC basis by dividing cost per Lwt. pound by dressing percentage.

$$25.0 \div .76 = 32.9 \text{ per RTC pound of broilers}$$

- 9) Calculate total costs per RTC pound of broilers at the wholesale marketing level by adding estimated farm-to-wholesale marketing costs per RTC pound of broilers to production costs per RTC pound.

$$32.9 + 14.0 = 46.9 \text{ per RTC pound of broilers}$$

The cost of producing and marketing broilers to the wholesale market for January 1982 was 46.9 cents per RTC pound. Average cost for the first quarter was 47.3 cents, the monthly costs for January, February, and March weighted by monthly production.

**Table 1—Factors used to calculate costs of producing and marketing broilers, 1972-82<sup>a</sup>**

Year	Ingredient delivery charge to mill		Percent in ration		Factor to adjust for other ingredients <sup>b</sup>
	Corn (cts/lb)	Soybean (\$/ton)	Corn	Soybean (Percent)	
1972-75	10.0	12.00	70.86	29.14	1.05
1976-77	11.9	10.75	70.00	30.00	1.07
1978	24.8	11.50	70.00	30.00	1.09
1979	24.8	15.00	70.00	30.00	1.09
1980-81	26.5	15.70	70.00	30.00	1.09
1982	34.3	19.80	70.00	30.00	1.09

  

Year	Feed <sup>c</sup> conversion	Milling charges <sup>d</sup>	Nonfeed production cost	Dressing percent	Farm-to-wholesale marketing costs <sup>e</sup>
	(lbs./unit)	(\$/ton)	(cts/lb)	(Percent)	(cts/lb)
1972	2.13	14.00	5.33	72	8.30
1973	2.13	14.00	5.82	72	9.00
1974	2.10	14.50	6.17	73	10.00
1975	2.10	14.50	6.20	73	10.30
1976	2.10	9.80	6.20	73	10.50
1977	2.10	9.90	6.30	73	10.75
1978	2.10	10.17	6.57	74	11.10
1979	2.10	10.56	7.82	75	12.50
1980-81	2.10	12.24	8.40	75	13.50
1982	2.08	11.18	8.60	76	14.00

<sup>a</sup>AERS data. Data for eggs and turkeys available on request. <sup>b</sup>Estimate to adjust cost for other ingredients and feed additives. <sup>c</sup>Pounds of feed per Lwt. pound of broilers. <sup>d</sup>Charge for milling and delivery to farm. <sup>e</sup>Cents per RTC pound of broilers. Farm-to-wholesale costs include assembly, processing and packing and delivery.

## Prices and Net Returns

In the earlier years, the costs and returns series included farm level prices and net returns. Changes in the industry's structure and methods of marketing have drastically reduced exchange of product at the farm level. In recent years, the costs and returns series have been concerned primarily with wholesale prices, the first true exchange and pricing point for broilers.

Between 1955 and 1963, wholesale price calculations for broilers were based mainly on New York wholesale prices per RTC pound for ice packed whole birds. Since 1964 prices have been the 9-city weighted average wholesale prices. Net returns per RTC pound are calculated by subtracting total costs of production and marketing from average wholesale prices for ice packed whole birds.

### Trends in Costs and Returns For Broilers

Average annual costs per pound for RTC whole broilers at wholesale changed very little from 1962 through 1972. Then, in 1973, costs jumped by 40 percent and remained relatively steady at this higher level through 1978, when another upward trend began. Production costs increased mostly because of higher feed prices, although the 1973 increase was also partially due to a large rise in energy prices. In recent years, however, prices of other production and marketing items, such as labor and packaging materials, also have trended upward. The broiler industry has a strong history of increasing productivity; thus, input price increases have not been fully reflected as cost increases. Gains in productivity have been slower in recent years, however, and there is a closer relationship between input price changes and changes in production and marketing costs.

Wholesale broiler prices have been somewhat more variable than costs, though they were within 3.0 cents per pound of costs in 17 years of the 20-year period. Prices fluctuated above and below costs so that net returns for whole birds were positive in 11 years, negative in 8 years, and zero in 1972. Average annual net return for the 20 years was 0.4 cents per RTC pound and has averaged slightly higher, 0.5 cents, during the last half of the period. Fluctuations in price and in net returns have been greater since 1973 than in the previous 11 years. Net returns for whole broilers were negative for 1979 through 1981 and the loss per pound increased each year. This is the longest period of negative net returns in the 20 years covered, and it follows the longest period of positive net returns, 1975-1978. Net returns early in the 20-year period appear to have followed a cycle of about 2 years positive and 1 year negative. Lately, the cycle appears to be lengthening and the peaks and valleys appear more pronounced.

### Some Considerations on Using the Series

A truly average cost-returns series would reflect the weighted average price received by the industry for its complete product line rather than just whole birds. It also would include the weighted average cost of producing and marketing that product mix. The ERS series does not attempt to present such a weighted average. The procedures and factors used to calculate the ERS net

returns series are designed to provide benchmark estimates of economic conditions for the basic products of the industry. Prices and productivity of inputs are those for typical units in the production, processing, and marketing of the specified product—RTC, ice packed whole broilers. Individual firms will usually face different input prices, costs, performances, and product prices. These differences should be accounted for if the series is used to measure individual firms' performance or to estimate the cost of a firm's products.

### Why Not an Alternative Procedure To Calculate Net Returns?

The ERS net returns series for broilers uses as its product price the 9-city weighted average wholesale price for whole birds in ice pack. In the 1950's and early 1960's, over 80 percent of broilers marketed at the wholesale level were sold in this form (table 2). The 9-city whole bird price was an acceptable one for calculating broiler firm receipts. However, during the past 20 years there have been dramatic changes in the distribution of broilers certified among product forms. By 1981 only 47 percent of the broilers federally inspected were certified as whole birds (table 2). In the early 1960's less than 20 percent of the broilers were certified as cut-up, but by 1981 this proportion had increased to 42 percent. Further processed broiler products (batter dipped, cooked, etc.), about 2 percent of poundage certified in the early 1960's, had moved up to 11 percent in 1981.

To demonstrate how this change in product mix might affect the economic wellbeing of the broiler industry, a partial blend price was developed and used as the average price received by processors. This blend price was the weighted average of wholesale prices for broiler parts and whole birds. Whole bird prices used were the 9-city prices in the ERS net returns series. For parts, New York wholesale prices for broiler parts were used to calculate a composite price series. Prices in the parts series were averages of annual prices for individual chicken parts weighted according to the proportion of a whole bird represented by each part. The weights used, based on several published sources and unpublished data from broiler processors, were:

breasts	.30
legs	.33
wings	.11
backs/necks	.19
gizzards	.03
hearts	.01
livers	.03
total	1.00

New York composite parts prices were compared with New York quotes for whole birds (table 2). The differentials were then added to the 9-city average prices for whole birds to develop an estimated 9-city composite price series for parts.

Average parts prices were greater than whole bird prices each year of the study, and there was an increase in the differential throughout the period. Prices for breasts and wings, about 40 percent of whole bird weight, increased much faster than whole bird prices between 1962 and 1981. In fact, wing prices, lower than whole

**Table 2—Distribution by product form of broiler poundage certified under Federal inspection, and New York wholesale prices for whole birds and cut-up parts, 1962-1981**

Year	Product form			New York broiler prices		
	Whole	Cut-up	Further processed	Whole	Cut-up	Difference
	<i>Percent</i>			<i>Cents per pound</i>		
1962	83	15	2	28.9	30.3	2.3
1963	81	16	3	27.2	29.2	2.0
1964	80	18	2	23.6	28.8	5.2
1965	78	19	3	25.3	30.2	4.9
1966	77	20	3	22.9	31.4	8.5
1967	74	22	4	22.7	28.4	5.7
1968	72	23	5	25.3	30.5	5.2
1969	71	25	4	28.8	32.1	3.3
1970	70	26	4	26.3	29.9	3.6
1971	66	28	6	27.0	30.8	3.8
1972	65	30	5	28.0	32.6	4.6
1973	62	31	7	42.0	49.2	7.2
1974	63	31	6	37.4	44.4	7.0
1975	61	32	7	44.7	51.5	6.8
1976	58	35	7	39.8	47.0	7.2
1977	54	38	8	40.2	46.8	6.6
1978	54	38	8	43.6	50.8	7.2
1979	54	37	9	43.5	50.6	7.1
1980	50	40	10	46.6	55.4	8.8
1981	47	42	11	45.3	53.7	8.4

bird prices through the 1960's and early 1970's, were about the same as whole bird prices in the late 1970's and into the 1980's. Prices for breasts and legs, over 60 percent of whole bird weight, were substantially greater than whole bird prices throughout 1962-1981.

The estimated 9-city composite parts prices and 9-city whole bird prices were used to calculate a 9-city blend price series for broilers (table 3). Average parts prices were weighted by proportions of broilers cut up under Federal inspection. Whole bird prices were weighted for the proportion reported as whole birds or further processed. (Price and processing cost data were not available for further processed products. These products represent an increasing proportion of broilers sold and they probably return a higher than average net per pound. However, since they remain a relatively small proportion of the total and because data are limited, it was assumed that including them as whole birds would not seriously limit this analysis.)

There are also costs associated with broiler cut-up operations. Based on data collected in surveys of broiler processing plants in the mid-1970's, it was assumed for this illustration that annual average market costs for cut-up parts were 1 cent greater than ERS estimated annual average market costs for whole birds. A blend cost series was estimated using weighted averages of ERS whole bird costs and these adjusted market costs for parts. Net returns for broilers, accounting for some changes in the product mix sold, were calculated by subtracting these annual average blend costs from annual average 9-city blend prices.

For every year of the study, net returns for broilers were greater (or losses were smaller) when adjusted for parts sales than when only whole bird sales were considered. Improvements in the net returns picture were relatively small in the 1960's. However, through much of the 1970's, net improvements were about 2 cents per pound, and 1980-81 losses decreased about 3 cents per

pound. It is likely that if net returns for further processed products were accounted for, average net returns using the blend-of-products approach would have been even larger. Considering branded products, which several firms are now stressing, also would increase net returns.

As desirable as it would be to have the series based on a blend of broiler products, it would require substantial additional data not currently available. Costs for individual operations within processing plants are not readily separated, thus costs for cut-up and further processing and branding would be difficult to differentiate. Estimation of average costs for further processed products would be particularly difficult because of the wide variety of products and continual new product development. Conclusions would be quite sensitive to the assumptions made and the allocation of costs and receipts to different products and services. This could be a major source of variability during periods when the industry is adjusting to changing market conditions. Net returns are a residual, small portion of gross receipts. Therefore, a minor change in either costs or receipts will have a relatively strong impact on net returns.

Besides the problems of accurately estimating costs, it would be difficult to develop meaningful average price series for cut-up parts, further processed, and branded products. Prices received for parts depend not only on the part sold but also on factors such as the type of cut, packaging, and other variables. Further processed product prices vary among product lines. However, because of product differentiation and advertising, they also vary within product lines.

Thus, while product-blend series would be helpful, the available data base would not permit their rigorous development. Furthermore, use of such an alternative method would result in a much more complicated and less understood series, thereby reducing their usefulness.

The current procedure, when its limitations are considered, appears to provide the most meaningful and useful series for the industry and for public observers. Inputs, costs, and prices for the whole bird series can be readily adjusted. This basic series might be expected to show very low—even negative—returns when supplies

are burdensome and when margins are favorable for cut-up and further processed birds. The alternative blend price procedure demonstrates the constraints of the current series and implies the adjustments needed when comparing it with an actual operation.

**Table 3—Estimated costs and returns for ready-to-cook broilers at wholesale market level, 1962-81**

Year	Whole birds			Market mix, whole and parts		
	Total costs	9-City weighted average price <sup>a</sup>	Net returns	Total costs	9-City weighted average blend price	Net returns
	<i>Cents per pound</i>					
1962	26.8	28.0	1.2	27.0	28.3	1.3
1963	26.6	27.2	.6	26.8	27.5	.7
1964	26.0	25.4	-.6	26.2	26.3	.1
1965	26.3	26.4	.1	26.5	27.3	.8
1966	26.8	27.6	.8	27.0	29.3	2.3
1967	26.2	25.2	-1.0	26.4	26.5	.1
1968	25.7	27.2	1.5	25.9	28.4	2.5
1969	26.5	29.1	2.6	26.8	29.9	3.1
1970	27.1	26.4	-.7	27.4	27.3	-.1
1971	27.6	27.2	-.4	27.9	28.3	.4
1972	28.2	28.2	.0	28.5	29.6	1.1
1973	39.8	42.2	2.6	40.1	44.6	4.5
1974	40.1	38.0	-2.1	40.4	40.2	-.2
1975	39.4	45.2	5.8	39.6	47.4	7.8
1976	39.4	40.2	.9	39.8	46.0	6.2
1977	40.5	40.9	.4	40.9	43.4	2.5
1978	40.2	44.6	4.4	40.6	47.3	6.7
1979	45.4	44.3	-1.1	45.8	46.9	1.1
1980	48.3	46.8	-1.5	48.7	50.3	1.6
1981	51.3	46.3	-5.0	51.7	49.8	-1.9

<sup>a</sup>1962 and 1963 used New York wholesale price.

# ELECTRONIC INFORMATION ACCESS

Economic Research Service Outlook and Situation report summaries are available to subscribers of the Dialcom electronic mail system and the Martin/Marietta data system.

The summaries highlight the latest USDA supply/demand and price forecasts for U.S. and world crops and livestock, and prospects for exports and the agricultural economy.

The summaries are on line by 3:30 p.m., Washington, D.C. time, on the dates listed. (Release dates are subject to change.) For information about Dialcom, call (301) 588-1572, for Martin/Marietta (301) 982-6500.

September		November	
1	Agricultural Outlook	3	Fruit
2	Sugar & Sweetener	4	Agricultural Outlook
7	Fruit	16	Wheat
14	Tobacco	19	Livestock & Poultry
16	Dairy	23	Cotton & Wool
20	World Agriculture		
21	Rice		
29	Agricultural Outlook		
October		December	
6	Livestock & Meat	7	Sugar & Sweetener
15	Fats & Oils	8	Agricultural Outlook
28	Feed	9	Tobacco
29	Vegetable	14	Dairy
		15	World Agriculture
		16	Fertilizer
		17	Agricultural Finance



UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

POSTAGE NO FEES PAID  
U.S. DEPARTMENT OF  
AGRICULTURE  
AGR 101

FIRST CLASS



To stop mailing  or to change your address   
send this sheet with label intact, showing new  
address, to ERS Publications, Rm. 0054-South,  
USDA, Washington, D.C. 20250

# Information for Decisionmakers

from the Economic Research Service

Keep current on these vital topics:

- ★ Commodity supplies and demand
- ★ Prices and costs
- ★ Trade and marketing
- ★ Food and fiber

- ★ Land and water developments
- ★ Rural life

The **ERS Abstracts** newsletter lists all current agency publications prices. To be placed on its free mailing list, write to:

Information Division, EMS  
Room 1664-S, USDA  
Washington, D.C. 20250