Current Report

Cooperative Extension Service • Division of Agriculture • Oklahoma State University

Broiler Industry Outlook

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The poultry industry has been a growth industry in recent years. Innovations making poultry products more convenient and available, aggressive marketing by poultry companies, a low price relative to other meats and health concerns have contributed to a steady increase in poultry consumption. As demand for the industry's product increased, poultry production became big business with increasingly integrated, market responsive and profit driven firms taking the lead.

This Current Report identifies the major players in the broiler industry and highlights trends in production, consumption, and prices. The significance of broiler production in Oklahoma and the industry's growth potential are also discussed.

Industry Growth Potential

Broiler industry growth rocketed after specialized broiler operations emerged in the late 1930s and early 1940s. Broiler production is now dominated by a handful of integrators, most of whom control their product from incubation to retail. The first point of sale of broiler products is usually not at the farm, but later when a dressed, cut-up, or ready-to-cook entree is sold to a wholesaler or retailer.

The farmer/grower level of the industry has also seen changes, including increased concentration. Fewer growers are producing more and more birds. New feed formulas, improved broiler strains, and advanced vaccines and medications have raised broiler growth rates and reduced mortality rates. Improved facilities, such as controlled environment grower houses and hatcheries, have also contributed to greater efficiencies. The combined effect of improvements has been an increase in output in all but 5 of the past 50 years.

In 1987, the broiler industry reached the peak of the construction cycle responding to the dramatic shift in profitability in the early to mid 1980s. Fewer plans for construction in growout housing in 1988 are likely. Only when the next upturn in broiler profitability occurs are integrators likely to significantly expand housing.

Major advancements in broiler production technology are increasingly difficult to come by. The industry has matured so that improvements must come from fine-tuning existing technology by making subtle changes in nutrition, genetics and housing. Chicken breeders have steadily developed birds that grow bigger on less feed in less time, but breeders may be approaching a maximum on feed efficiency. (Broilers can convert 2 pounds of feed to a pound of gain, whereas hogs require 3 or 4 pounds and cattle 6 or 7 pounds of feed per pound of gain.) Since chickens have a shorter life cycle, they can and have been manipulated genetically more quickly.

Industry analysts predict the slump won't last nearly as long as the boom did. Consumption is still rising, new products are being developed and brand names are becoming established. Chicken consumption, fueled by a growing population and per capita consumption levels, will probably continue to rise for several years.Value-added items, that is, chicken parts that have been boned, skinned, marinated or otherwise processed for the convenience of consumers, are likely to increase in market share. Greater use of microwaves, higher family incomes and more eating out will all add to continued industry growth. New markets may be created, for instance, for consumers who belive that free range chickens taste better than chickens fed in confinement.

Major Players in the Broiler Industry

Commercial size independent broiler producers are virtually nonexistent. Instead, large integrated poultry companies contract with producers to produce broilers. These integrated companies control most aspects of production and marketing--they generally produce and hatch eggs for broiler chicks, schedule bird deliveries to farms, mix and deliver feed, pick up market size broilers, process and pack poultry meat, and produce and advertise further processed goods, including frozen dinners.

The top five broiler producers in the United States measured by production volume control more than half the market. As shown in Table 1, Tyson Foods, Inc.

Table 1. Leading broiler companies in U. S. based on estimated annual volume processed, 1986

Rank	Company	Annual Volume[1]	Proportion of Volume[1] In Top 20	Proportion of Volume[1] In Total Industry
		(mil. lbs. RTC wt)	(%)	(%)
1.	Tyson Foods, Inc.	2,277.6	17.25	13.82
2.	ConAgra, Inc.	1,549.6	11.74	9.40
3.	Holly Farms	1,288.5	9.76	7.82
4.	Perdue, Inc.	1,206.4	9.14	7.32
5.	Gold Kist, Inc.	1,201.2	9.10	7.29
6.	Pilgrim's Pride	650.0	4.92	3.94
7.	Hudson Foods	624.0	4.73	3.79
8.	Wayne Poultry	520.0	3.94	3.15
9.	Seaboard Farms	514.8	3.90	3.12
10.	Marshall Durbin Co.	416.0	3.15	2.52
11.	Foster Farms	403.5	3.06	2.45
12.	Fieldale Corp.	384.8	2.92	2.33
13.	Townsend Farms	338.5	2.56	2.05
14.	Cargill, Inc.	338.0	2.56	2.05
15.	Showell Farms	301.6	2.29	1.83
16.	Sanderson Farms	265.2	2.01	1.61
17.	Campbell Soup Co.	249.6	1.89	1.51
18.	Cagles, Inc.	235.0	1.78	1.43
19.	Simmons Industries	223.6	1.69	1.36
20.	McCarty Farms, Inc.	213.2	1.61	1.29
Total for top 20		13,201.1	100.00	80.10
Total for all companies[2]		16,481.4		100.00

[1] Estimated based on survey of 51 broiler firms as reported in *Broiler Industry*, December 1986. Weekly slaughter multiplied by 52 to get annual volume estimates.

[2] Reflects volume estimates from the survey. These numbers are higher than 1986 preliminary USDA estimates of young chickens slaughtered and certified RTC under federal inspection (14,225 million pounds).

Source: Broiler Industry/September, 1987

accounts for roughly 14 percent of the total industry volume.

Consumption Trends

Domestic Market

Poultry consumption has been increasing steadily for more than a decade (Figure 1), in part because of the industry's focus on meeting consumer needs. Factors contributing to the increase in poultry consumption include convenience, health concerns, economics, and integrator advertising. The U.S.D.A. projects that per capita consumption of poultry will exceed that of beef by at least 1990 and perhaps sooner. If that occurs, it will mark the end of more than three decades of dominance by beef (prior to beef's reign, pork consumption per capita was highest).

Further processing of poultry has increased the demand for products and increased profits of integrators. Poultry products can now conveniently be cooked at home and are frequently packaged for microwaving, a plus for consumers with limited time for cooking. A greater variety of chicken products are available in an increasing number of fast food restaurants. McNuggets, introduced in 1982, now account for 10 percent of U.S. broiler output.

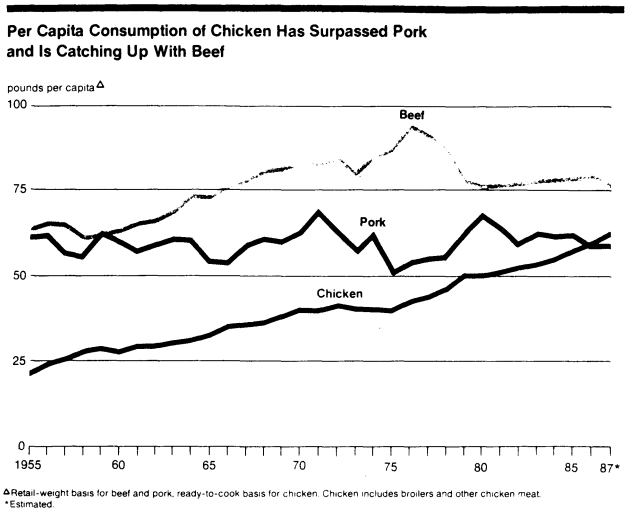

Figure 1

Diet, health and fitness trends have stressed leanness and birds are perceived as more healthful than beef. White portions, particularly breast meat, of chicken and turkeys have increased most in demand.

Economics has also played a role in the increase in poultry consumption. Figure 2 shows that poultry's price advantage relative to other meats is widening.

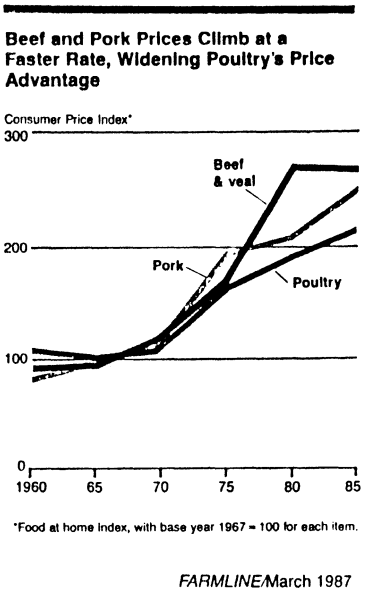

Figure 2

Poultry integrators have also aggressively advertised their brand name and further processed products. Whereas many agricultural products are sold as a generic commodity, broiler integrators have focused on developing customer loyalty.

Export Market

Exports were up 44 percent during January-August of 1987 compared to the same period in 1986. Export

Enhancement Program (EEP) shipments, primarily to the Middle East, and increased exports to Japan contributed to the increase. Japan, Iraq, Hong Kong and Egypt were the U.S. largest customers in 1987, purchasing nearly half the broiler exports (Table 2).

Table 2. U. S broiler exports to major importers, January-December, 1986-1987

County or area	1986	1987
	1000 lbs.	
Japan	167,145	171,199
Iraq	0	128,923
Hong Kong	77,609	120,114
Egypt	55,166	55,851
Singapore	53,528	52,332
Canada	31,712	46,100
Jamaica	55,531	41,666
Mexico	29,239	27,632
Leeward-Windwad Is.	22,380	23,262
Netherlands Antilles	11,458	17,944
Spain	3,590	11,217
French Pacific Is.	9,444	10,885
Other	49,354	44,429
Grand Total	566,156	751,554

Production Trends

The year 1986 was a major surprise for the broiler industry. Good profit margins in 1984 and 1985 were predicted to stimulate a large production response in 1986. However, production was only up about 5 percent because of housing and credit shortages, disease outbreaks severe heat in several regions, and other factors. And, strong domestic and export demand (largely because of the Export Enhancement Program) led to record profit margins for the industry (Figure 3).

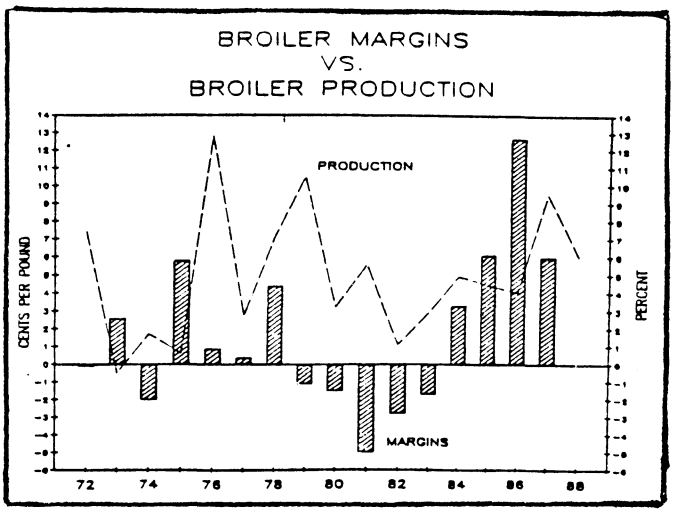

Figure 3

In 1987, production rose sharply and broiler breeder flocks continue to grow, although the rate of increase is now slowing. Even though the industry's profit margins are being squeezed, production may be up nearly 5 percent during 1988. The increase is likely to be much smaller for 1989. The result will be further price and profit margin pressure for 2 to 3 years. Some industry analysts say a "bloodbath" is possible in which financially strong integrators will take over more vulnerable integrators.

Profit and production cycles are typical in livestock industries. They exist because the producer's response to profit signals lag because of livestock's long reproductive cycles. When market prices are high enough to signal expansion, producers retain breeding stock, leading to lower supplies of meat, higher prices and further incentives to retain breeding stock. The long time span between the decision to keep additional breeding stock and the increase in livestock for market leads too many producers to increase production by too much. In the contraction phase, falling prices signal the need to reduce the breeding stock; consequently, more animals are marketed, further depressing prices and causing too many producers to reduce production by too much. Like cattle or hog producers, broiler producers can't adjust production instantaneously to suit the market, hence the fortunes of companies fluctuate.

Three major differences between poultry and red meat production cycles are:

1. The reproductive cycle for poultry is much shorter. Because of the shorter reproductive cycle, additional breeding stock can be producing chicks for growers less than a year after production expansion signals are recognized, allowing rapid adaptation to market signals compared to red meat industries.

2. The breeding flock does not affect the commercial production market channels. Broiler breeding stock does not enter the young chicken market when sold. And, additional placements in the breeder flock have little impact on broiler slaughter because breeder placements are not retained from commercial production chicks.

3. The poultry industry is highly integrated. Vertical integration adds efficiency to the production process. Integrated production firms are able to react to market signals much more quickly because of their ability to monitor market information closer to the retail level, schedule larger blocks of production and implement decisions to change production plans quickly.

Chicken companies used to operate in cycles of about three years, going from an undersupply to a glutted market and back to an undersupply. But the latest upswing in chicken stocks, which began in 1982, lasted about five years. Tremendous consumption increases driven by growing consumer demand, fast-food innovations, new marketing techniques and low feed prices overwhelmed production increases in broilers in the early and middle 1980's. Oversupply began to outpace all of those advantages in 1987.

Cycles have been most evident in wholesale level profitability figures. In the late 1950s, a two year cycle was typical. Each higher profit year was followed by a lower profit year. The 1960s brought three year cycles in

profits, but increasing concentration of the broiler industry through the 1970s lengthened cycles in wholesale profits from 2 years to 3 years.

Industry Problems

The industry continues to try genetic manipulation, ultrasound treatments, vaccinations, and stress reduction to reduce salmonella contamination. According to a recent report by the National Academy of Sciences, only 1 to 4 percent of chickens typically arrive at a slaughterhouse infected with salmonella, but about 35 percent of all birds leave contaminated. Currently, government poultry inspectors monitor chickens for aesthetic flaws and obvious diseases but not for bacterial contamination. However, regulations may change. The poultry industry is actively researching ways to minimize potential salmonella problems.

Oklahoma's Broiler Industry

How does Oklahoma's broiler industry fit into the national picture and what is the potential for growth? The top 10 broiler production states produce 83.6 percent of total broiler production. Oklahoma ranked 14th in production and accounted for approximately 1.5 percent of the total U.S. production (79.5 million birds, 326 million pounds) in 1986. Three Oklahoma counties rank in the nation's top 100 counties in total broiler and meat chick production--McCurtain (70th), Adair (76th), and Delaware (92nd).

Broilers rank 4th in Oklahoma in value of cash receipts from commodity produced at $114 million. Cash receipts from broilers have more than doubled since 1982, with the greatest increase from 1985 to 1986 (Table 3).

Table 3. Cash Receipts from Agricultural Production in Oklahoma (Millions of Dollars)

	Broilers	Cattle & Calves	Wheat	Dairy Products
1982	53.5	1,728	799	166
1983	60.9	1,335	559	163
1984	79.1	1,388	549	153
1985	73.4	1,349	592	156
1986	114.1	1,430	356	153

Integrators in Oklahoma

Table 4 lists commercial poultry companies with broiler growers in Oklahoma. None of the companies listed are headquartered in Oklahoma. Until 1986, a state feed inspection law which taxed feed for contract flocks was a disincentive to integrator expansion into Oklahoma.

Industry Growth Potential

The growth of the industry in Oklahoma depends on the fortunes of companies presently here. The industry is expanding in and around the area in which it already exists, and does not appear to be moving as such. A number of factors are likely to limit the industry to expansion from beyond present base:

1. Most processing plants, broiler hatcheries and many feed mills are out of state. Investment costs of $50-55 million for a hatchery, feed mill, and processing plant make costs of moving to new locations and building new facilities prohibitive. Integrators prefer to expand existing facilities, remodel old plants and double shift to increase production. Trucking costs from feed mills, hatcheries and processing plants make delivery to growers outside a particular area (usually less than 100 miles) uneconomical. Figure 4 shows the location of major broiler facilities in Oklahoma. Circles in Figure 4 indicate the 60 mile range from facilities in which broiler growers are concentrated.
2. Changes in lease laws with the Tax Reform Act of 1986 may dampen incentives for building broiler grower houses.
3. Lower profits for integrators, whether due to a slow down in growth in consumption or an oversupply of poultry or a decrease in prices of broilers mean less push for more houses in the state.

Table 4. Commercial Poultry Companies with Broiler Growers in Oklahoma

Company	Rank in Total Broiler Slaughter (U.S.)
Tyson's Foods, Inc.	1
Con-Agra, Inc.	2
Pilgrim's Pride	6
Hudson Foods	7
Campbell Soup Co.	17
Simmons Industries	19
George's	*
Peterson's	*
OK Foods	*

* Not ranked in top 20 in U.S.

Summary and Conclusions

The poultry industry, though currently susceptible to overproduction that is being magnified by concern over salmonella, appears well-equipped for future growth. The integrated nature of broiler production should enable it to be increasingly market responsive, while minimizing the negative impact of livestock cycles.

Although Oklahoma's broiler production is a small portion of the industry total, the poultry industry has been an asset to Oklahoma's economy in recent years, particularly in eastern Oklahoma counties. The broiler industry has been growing at a time when much of the state's industry growth was at a standstill. The income generated from broiler production provides much needed diversity in farm revenue.

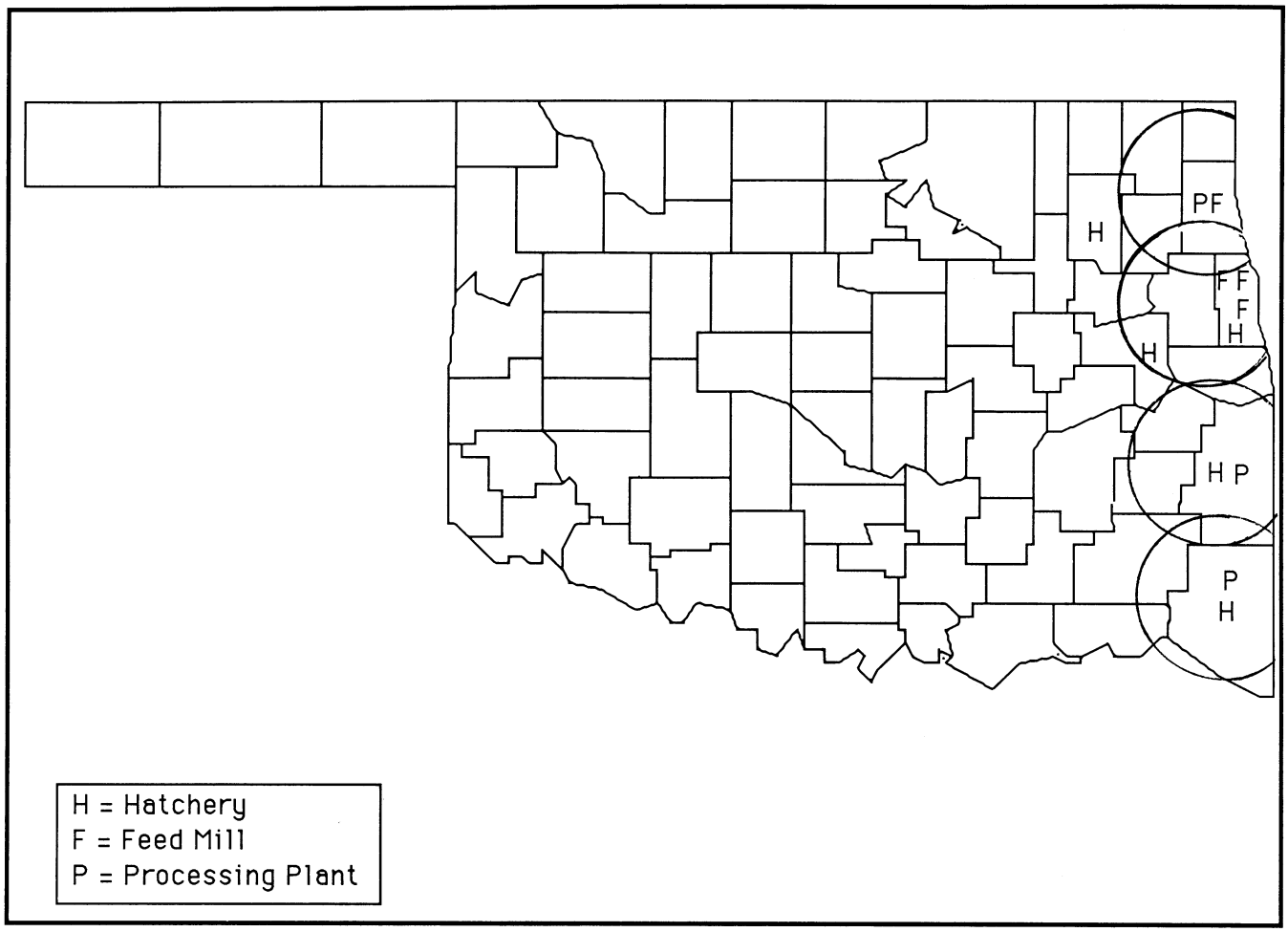

Figure 4. Broiler Facilities in Oklahoma

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