Poultry Processing Economic Review

December 2016

by Robert Miles and Juanita Schwartzkopf
Focus Management Group

FOCUS
Management Group

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I. Introduction

Focus Management Group ("Focus") has prepared this overview of the poultry processing industry to assist stakeholders in their understanding of the industry, the micro- and macro-economic forces which impact the financial performance of companies operating in this sector, and the analysis tools that can aid restructuring efforts. The purpose and objectives of this Paper are outlined below.

Purpose

- To provide background into the poultry and the feed grain markets.
- To develop an understanding of the concepts related to analyzing the financial performance of poultry processors—including both First Processors and Further Processors of poultry meat.
- To provide and explain financial and operating analysis tools useful in understanding a poultry processor's ability to maintain profitability.
- To provide a framework for discussing restructuring alternatives with poultry processors or their stakeholders.
- To provide a source for statistical information relating to the poultry processing industry in terms of both inputs and outputs.

Objectives

- Discuss the macroeconomic environment in which the poultry processor operates, including supply and demand issues, market conditions, and feed cost issues.
- Discuss the microeconomic environment that impacts a processor's cost structure and throughput management.
- Discuss the opportunities a processor has to diversify into various levels of further processing as a strategy that can enhance stability and provide additional outlets for product.
- Address the methodology used to assess a processor's risk factors in maintaining profitable operations.
- Identify financial and operating information that is needed for a stakeholder to understand and monitor the performance of a processor.

I. Introduction

Executive Summary

The U.S. poultry industry exhibits many unique characteristics, which combine to create challenges for stakeholders seeking to develop turnaround or restructuring strategies for poultry companies. This Paper seeks to provide the reader with an overview of the poultry industry, and to provide insight related to turnaround and restructuring considerations in this niche market.

Our study analyzes the changing relationships between broiler prices (chickens raised for meat) and feed costs, and assesses the resulting complex decisions facing poultry processors regarding flock management, further processing, optimal bird weight, etc.

We also identify how the interaction of key performance indicators can serve as a pivotal tool in determining the viability of a poultry operation. In the case of non-viable operations, we discuss at length the factors that must be addressed when considering a poultry processor liquidation.

Finally, the Paper outlines in detail how potential fluctuations in the commodities markets in the future may result in margin compression for poultry processors. While the cyclical nature of feed prices creates periodic highs and lows in the financial performance for poultry producers, the industry also faces challenges related to growing concerns over food safety, environmental issues, and animal welfare, as well as potential Russian competition in the export market.

Industry Overview

- The U.S. poultry industry is highly concentrated: two poultry processors represent 40% of the market, and over 90% of the market is captured by two dozen companies.
- Exports represent 17% of broiler production. A majority of exports are shipped to Russia, China and Mexico.
- Poultry prices are not determined in publicly traded markets, in contrast to markets which establish prices for commodities such as corn, cattle and hogs. Though the establishment of a poultry futures market has been attempted in the past, all such efforts to date have failed. Instead, prices for poultry are negotiated between individual suppliers and purchasers, with average daily prices being reported to the Georgia Department of Agriculture, which then posts these prices, effectively creating the "market price" for poultry.
- Poultry prices hit an all-time high in 2014 at approximately $1.05 per pound on a national composite average. Since 2014 the national composite average price has fallen 18% to $.86 per pound. The USDA long term projections indicate prices will be relatively stable over the coming 10 years.
- The U.S. poultry industry recently experienced a period of increasing input costs (feed) (2006-2012) and increasing output prices (meat). However, price increases for outputs lagged input cost increases, thereby creating financial distress for many industry participants. A period of increasing grain prices also occurred approximately 10 years earlier and will likely happen again.
- Feed costs fall outside the direct control of industry participants. For example, the price of corn (a major feed component for the poultry industry) peaked in 2012, and has risen overall in recent years in part as the result of increased demand for corn arising from ethanol production. While industry participants are able to vary their feed component mix within set parameters, during times when all feed components increase in price, the net impact to poultry producers will be reduced profitability. In the recent past, feed costs have fallen, primarily due to an increase in supply of grains, as acres planted and yields have grown.

I. Introduction

Poultry processing improvements have produced faster time to market and larger bird weights, (currently 48 days and 4.6 pounds, respectively). These improvements have been in response to steady increases in poultry consumption from 48.0 lbs/person in 1980 to a peak of 89.1 lbs/person estimated for 2016. Consumption previously peaked at 86 lbs/person in 2006, then dropped due to price increases driven by feed costs but has rebounded sharply in the past two years.

Turnaround & Restructuring Alternatives

- When analyzing the performance of a poultry processor, it is important to differentiate between the impact of day-to-day management decisions and the impact of larger macroeconomic factors. Critical to any performance recovery is an understanding of the root cause of financial performance problems.
- Turnaround success is centered on understanding the operating performance of the individual poultry producer. Throughput is a key element to reducing production costs. Availability of throughput metrics, including downtime, yield per line per hour, etc., is critical to evaluating turnaround and restructuring options. Also, critical is an understanding of vendor and customer contracts and their impact on cash flow.
- The Focus Poultry Performance Matrix© provides a unique tool for understanding the combinations of performance which can result in a poultry producer achieving success. The output from this Matrix, when coupled with analysis of a poultry producers' various metrics, contracts, etc., provide stakeholders with an ability to assess the likelihood of an industry participant attaining these combinations of performance that result in positive financial performance.
- Restructuring measures may be required if a financial and operating performance turnaround cannot be achieved under prevailing conditions. Such restructuring options include both in-court and out of court alternatives, ranging from direct lender negotiations to Chapter 7 liquidation. Turnaround and restructuring options in the poultry industry are complicated by the existence of potentially millions of live birds in production at any point in time. It is not possible to immediately close an operation that is struggling or failing. Careful planning is required in order to avoid significant loss of value.

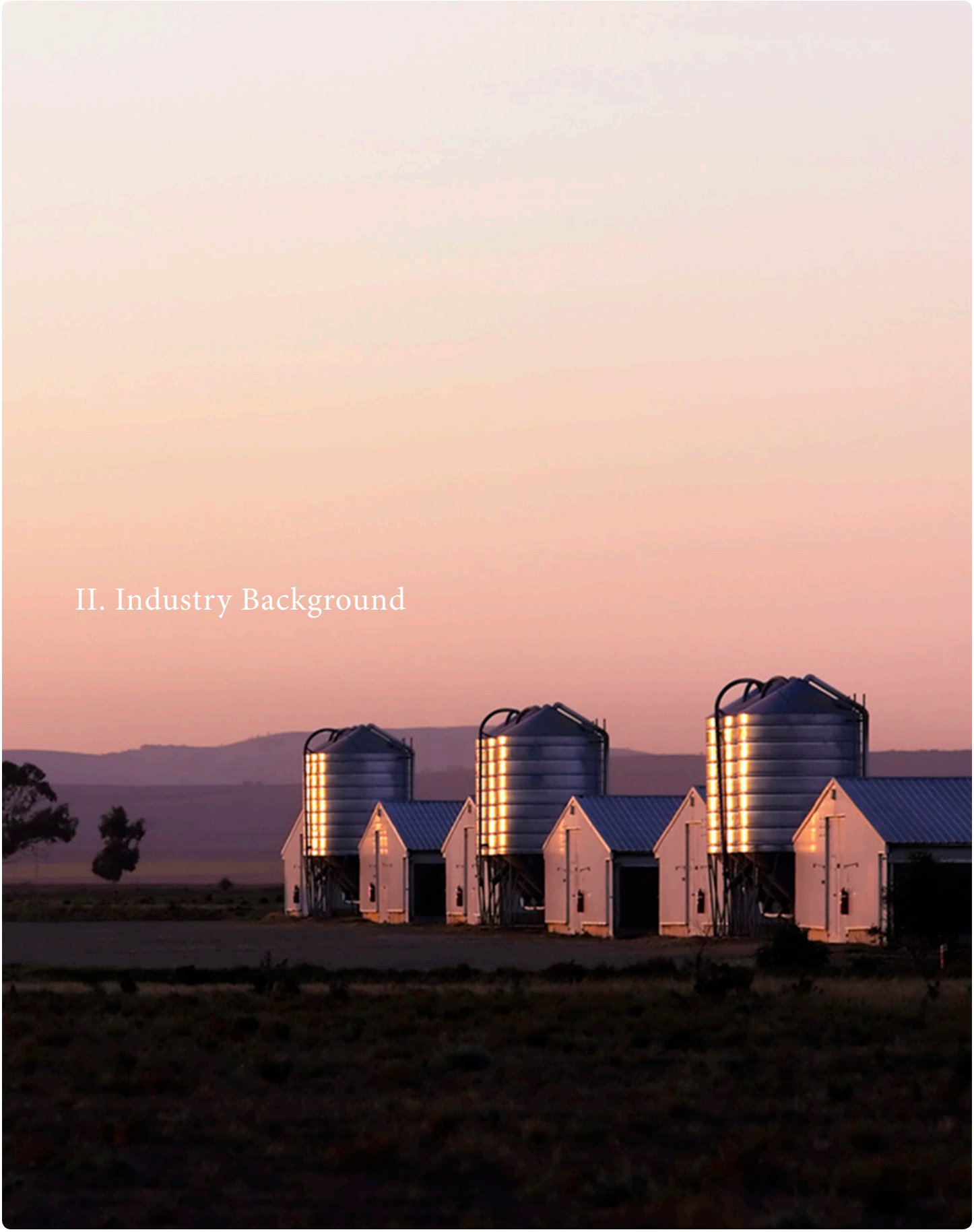
The industry-specific characteristics outlined in this Paper create diverse challenges for poultry processors and their stakeholders. Cyclical increases in feed cost, combined with lagging market prices for poultry products and potentially reduced consumption, create margin stress on all aspects of the industry.

In the face of such margin stress, processors and their stakeholders must quickly and carefully examine all factors affecting operating throughput to obtain advance warning of possible liquidity issues.

Failure to closely monitor poultry producers for signs of negatively trending performance metrics, and rapidly address issues identified at poorly performing operations, can result in unnecessary loss of collateral and/or recovery to stakeholders.

The output from this Matrix, when coupled with analysis of a poultry producer's various metrics, contracts, etc., provide stakeholders with an ability to assess an industry participant's likelihood of attaining those combinations of performance that would result in positive financial performance.

II. Industry Background



II. Industry Background

In the meat industry, there are first processors and further processors. Companies that raise and slaughter animals are considered first processors and those that take the meat after slaughter and prepare it for the market are considered further processors.

Many poultry processing companies have both first processing and further processing operations. For example, Tyson Foods raises and slaughters chickens, cattle and pigs, then further processes the meat into institutional or retail items, by freezing, sizing, cutting into components, or cooking and packaging the first processed meat.

This Paper discusses both the first processing and further processing of poultry. As with any industry, there are terms and jargon that are unique to the poultry industry. A glossary of such terms is included in this paper as Section VIII.

First processing of poultry is a complex mixture of science and logistics to efficiently produce an eviscerated chicken ready for further processing. As set forth in Chart 2.1, the entire process begins with genetics, and ends with delivery of the product by the processing plant to the customer.

Chickens grown for mass consumption, referred in the industry as "broilers", have been genetically engineered to grow rapidly, have a low feed conversion ratio, produce large breasts, and be relatively disease resistant.

The Feed Conversion Ratio (FCR) measures how many pounds of feed are required to produce one pound of live bird weight, and is an important indicator of the performance of a processor. The lower the FCR, the less feed is needed to grow the birds.

Chart 2.1: Poultry Production Process

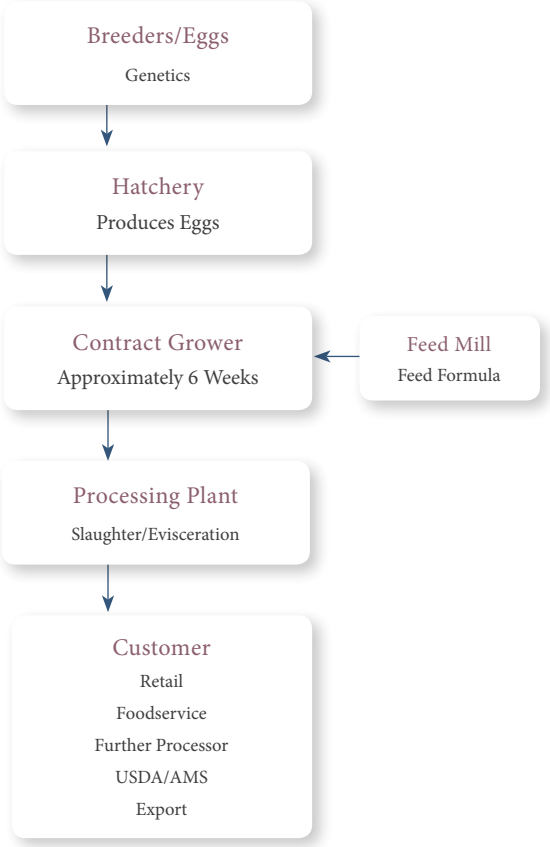


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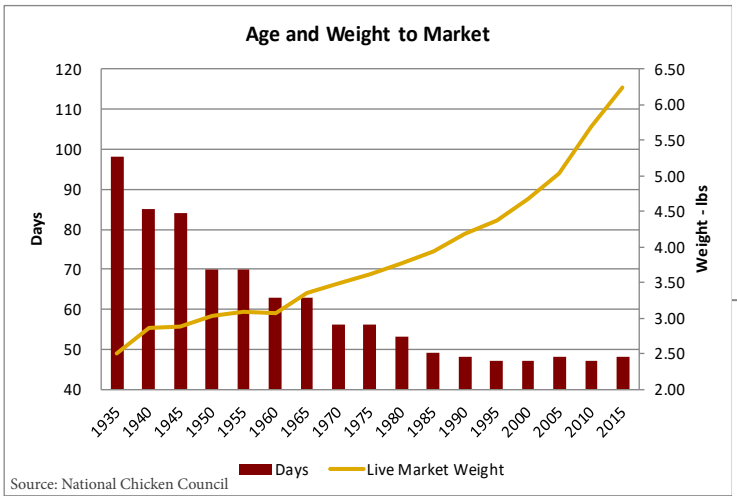
Chart 2.2 shows the changes in the average age and weight of a chicken from birth to market from 1935 to 2015. Over this time period, the average age of a chicken has been reduced from nearly 100 days old to less than 50 days old. Over this same time period the average weight of a chicken has increased from 2.5 pounds to over 6.0 pounds. The chicken purchased in a store or consumed in a restaurant today is generally just under seven weeks old.

The increased weight and speed to market has allowed the poultry industry to keep up with demand. As prices of feed rose from 2005 through 2013 the price of chickens rose as well. The price increases during this time period dampened demand, but In the last couple of years consumption has increased and has reached all-time highs, as noted in the following chart. Other than broilers, there are various terms for chickens of different weights and ages, such as Cornish hens, roasters and capons. For an explanation of these terms please refer to the glossary of terms in Section VIII of this Paper. Virtually all commercially grown chickens in the United States are broilers.

The time line on the following pages (Figures 2.4 and 2.5) shows the age and weight of the various products at date of harvest. According to the National Chicken Council ("NCC"), the broiler industry produces approximately 8.8 billion chickens annually for a total live weight of 53 billion pounds or 40 billion pounds of ready to cook chicken meat. (Continued on page 11.)

Chart 2.2: Age and Weight to Market



The per capita consumption of chicken in the United States is approximately 89 pounds per person per year. Based on ready-to-cook weight, the retail market accounts for 55% of the domestic poultry use, and the food service industry (institutional sales to schools, res-

Chart 2.3: US Chicken Production and Consumption

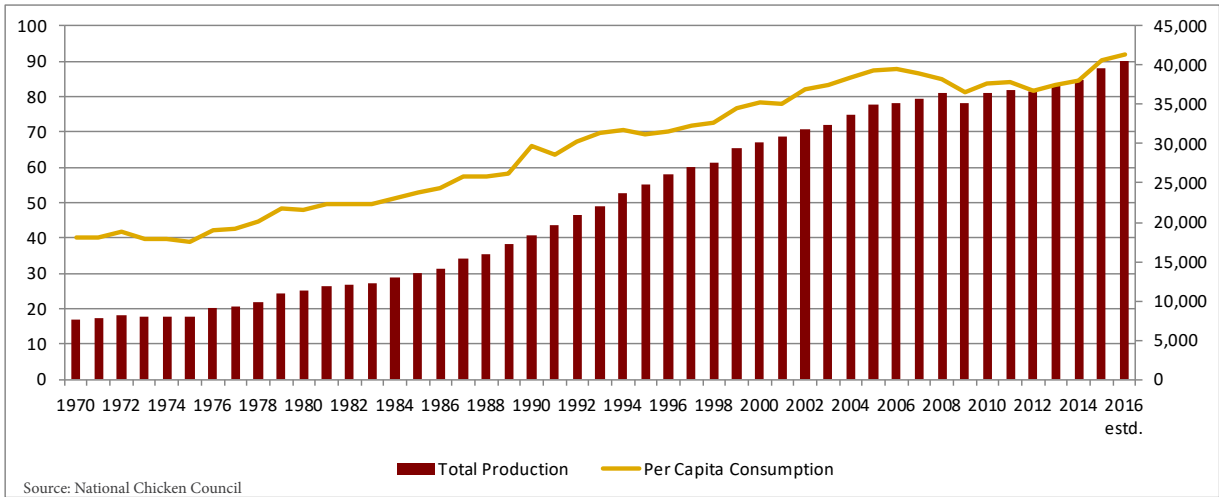


FIGURE 2.4: POULTRY PRODUCER FARM

Breeder Timeline

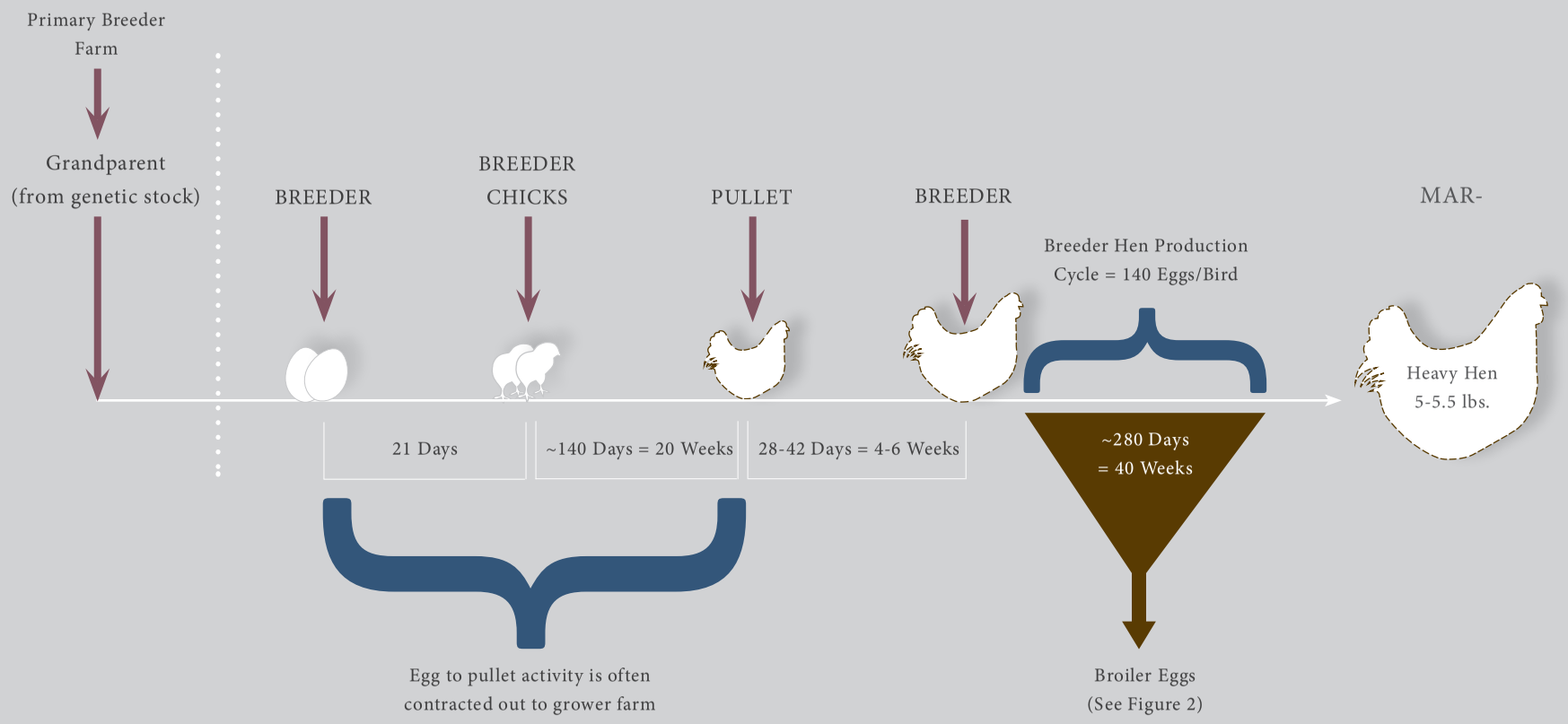
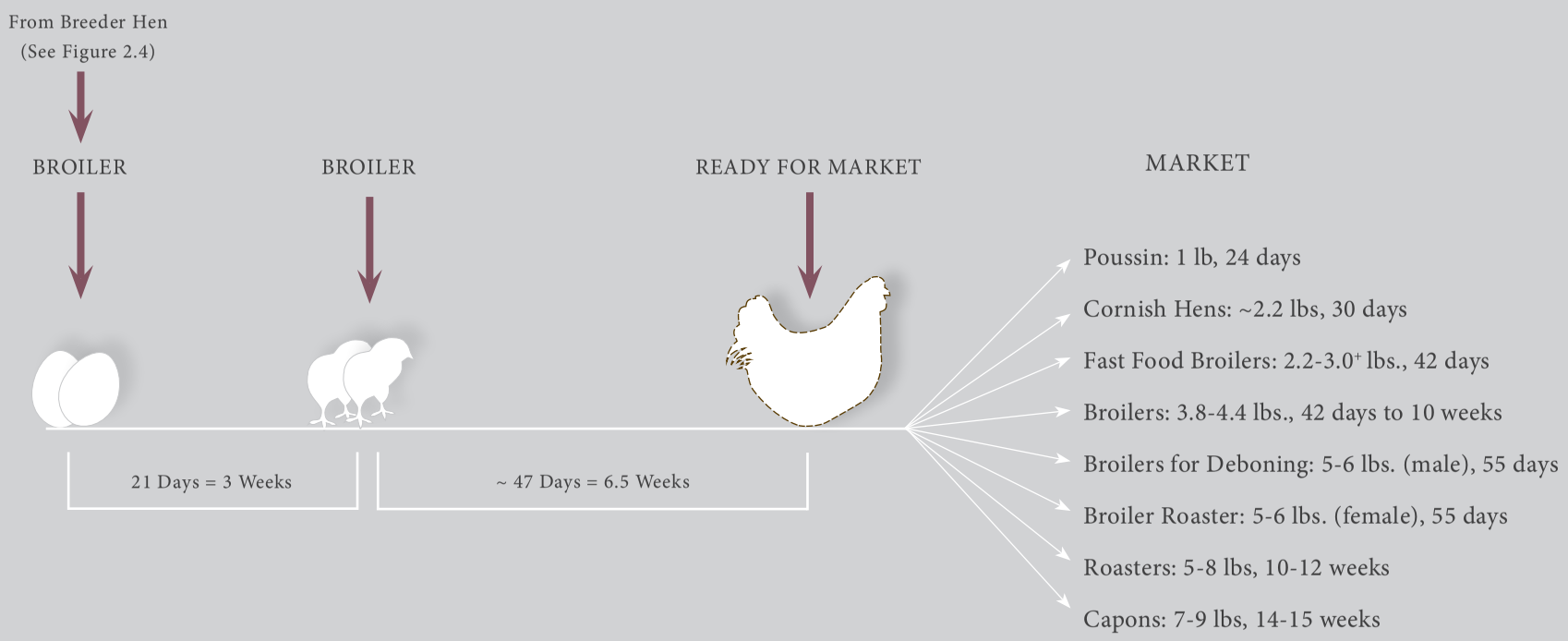


FIGURE 2.5: POULTRY PRODUCER FARM

Broiler Timeline



II. Industry Background

taurants, military, etc.) accounts for the remaining 45%.

The US Poultry and Egg Association ("USPEA") lists thirty-six broiler companies on its website. The two largest broiler companies, Tyson Foods Inc. and Pilgrim's Pride Corp. account for 37% of the 2015 market. Table 2.6 below shows the top twenty broiler companies and their relative market share.

Broilers, also known in the industry as WOGs (With-Out Giblets), are a commodity product with little or no product differentiation based on the processors. Although Tyson Foods and Pilgrim's Pride are the major players in the industry, no single company controls the price in the market place.

Georgia is the largest broiler-producing state, followed by Alabama. Broiler production is concentrated in the Mid-Atlantic States through the Southeastern States, plus Texas and Missouri. The top ten broiler-producing states account for 75% of the total United States broiler production. Table 2.7 to the right shows the primary broiler-producing states. Poultry processors operate under the watchful eye of Food Safety Inspection Service ("FSIS") of the USDA. Any processor engaged in interstate commerce is subject to FSIS rules, regulations and inspection requirements. FSIS inspectors are present in a processing facility 100% of the time the facility is processing chickens.

Table 2.6: Top 25 Broiler Producing Companies in 2015

Top 25 Broiler Producing Companies in 2015				
2016 Rank	Company	Finished Weight Avg. Weekly Lbs. (1)	Finished Weight Avg. Annual Lbs. (1)	Market Share
1	Tyson Foods	176	8,780	20.6%
2	Pilgrim's Pride	142	7,084	16.7%
3	Sanderson Farms	66	3,310	7.8%
4	Perdue Farms	62	3,087	7.3%
5	Koch Foods	48	2,400	5.6%
6	Wayne Farms	48	2,384	5.6%
7	Mountaire Farms	46	2,305	5.4%
8	House of Raeford Farms	28	1,376	3.2%
9	Peco Farms	27	1,327	3.1%
10	Keystone Farms	21	1,040	2.4%
11	Foster Farms	21	1,038	2.4%
12	George's	20	1,025	2.4%
13	Amick Farms	20	980	2.3%
14	Case Foods	18	920	2.2%
15	Fieldale Farms	16	795	1.9%
16	Mar-Jac Poultry	15	750	1.8%
17	O.K. Foods	15	735	1.7%
18	Simmons Foods	14	690	1.6%
19	GNP Company	9	440	1.0%
20	Claxton Poultry Farms	8	421	1.0%
	Other	33	1,650	3.9%
	TOTAL(2)	**851**	**42,535**	**100.0%**

Table 2.7: Broiler Production by State

Broiler Production by State *(000's Omitted)* State	Number Produced 2015 (1)	%	Pounds of Live Weight
Georgia	1,268,345	14.6%	7,432,381
Alabama	1,039,857	12.0%	5,901,039
Arkansas	889,707	10.2%	5,744,019
North Carolina	773,429	8.9%	6,051,518
Mississippi	710,263	8.2%	4,479,489
Texas	609,601	7.0%	3,756,688
Missouri	437,458	5.0%	2,120,405
Delaware	347,109	4.0%	2,517,558
Virginia	334,821	3.9%	1,872,917
Kentucky	299,398	3.4%	1,748,685
Tennessee	299,027	3.4%	1,578,737
South Carolina	290,541	3.3%	2,108,127
California	261,072	3.0%	1,586,857
Louisiana	197,710	2.3%	1,182,314
Maryland	157,111	1.8%	896,557
Oklahoma	134,823	1.6%	888,887
West Virginia	113,637	1.3%	436,612
Pennsylvania	111,294	1.3%	619,003
Ohio	80,365	0.9%	450,675
Other States(2)	332,897	3.8%	1,795,692
Total(3)	8,688,465	100.0%	53,168,160

Source: *Poultry Production and Value 2015 Summary,* NASS/U.S. Department of Agriculture

(1) December 1, 2014 through November 30, 2015.
(2) "Other States" include FL, IN, WI, MN, WA, NY and NJ.
(3) Excludes states producing less than 500,000 broilers annually.

II. Industry Background

Free Range, Antibiotic Free (Natural), Organic

The terms "Free Range", "Antibiotic Free" ("ABF"), and "Organic" are terms which meet the labeling criteria established by United States Department of Agriculture ("USDA"). Free Range, ABF and Organic poultry is a small subset of the broiler industry, representing less than 2% of the market and has a different cost structure due to significantly higher feed and processing costs than those associated with conventional broilers. The factors in this subset of the poultry industry are not discussed in detail in this Paper, however they are summarized below:

- Free Range chicken simply means the chickens are allowed access to the outdoors for an undefined period of time. The chicken houses have a door that the chickens can walk out if they choose. In reality, chickens rarely leave the relative safety of the chicken house, meaning free range chickens are generally the same as the non-free range variety. Other than some minor costs of acquiring USDA-approved labels, and possibly having an outside service certify the chickens are free range, there is no additional cost to calling a chicken "free range".
- Antibiotic Free, also known as ABF or Natural chickens, are raised without antibiotics. In order for the label to state the chicken is antibiotic free, the chickens cannot have antibiotics introduced at anytime in the growing process. In recent years, chickens have begun to be inoculated with antibiotics at the egg stage. However, the USDA does not allow chickens inoculated in the egg to be described as Antibiotic Free. ABF chickens have a higher mortality rate than non-ABF chickens, and are therefore more expensive to raise.
- Organic chickens are raised entirely on 100% organic feed and may be labeled as USDA-certified 100% organic if certain conditions are met. The conditions include certification by an approved certifying agency that the requirements of organic labeling have been met. Organic feed may cost twice as much as non-organic feed, significantly raising the cost of the finished bird.

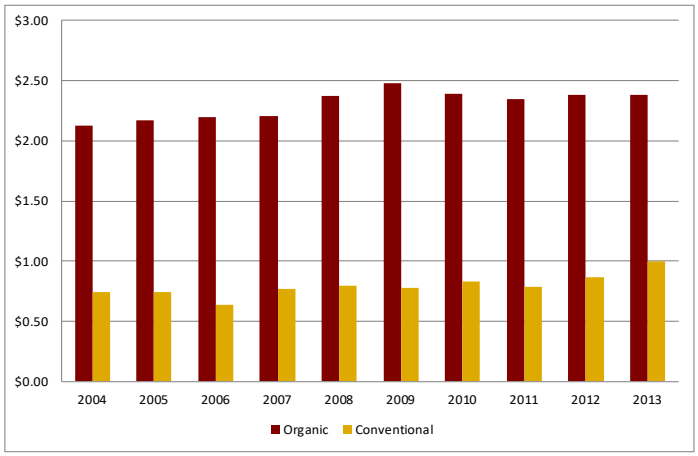
Currently, no published market prices exist for organic feed or organic or natural chicken, while there are published market prices for conventional feed and chickens. Organic feed is generally purchased from local farmers that are certified organic, which in turn allows for the chickens to be labeled organic. Organic feed prices do not necessarily move with the conventional grain markets and often rise and fall on different cycles than conventional feeds.

Because there is no established market for organic and ABF chickens, excess production of these birds must be sold on the conventional market. Because the cost to grow and produce organic and ABF chickens is much higher than non-ABF and non-organic chickens, selling the birds into the conventional market negatively impacts overall average selling prices and margins of the ABF and organic chickens.

These excess organic and ABF birds cannot be sold profitably or even close to a breakeven on the conventional market; therefore a producer of these products must match production to customer demand. Often organic and ABF first processors run one production line or one shift, to match the production to the demand. This results in higher processing costs being added to the already higher growing costs.

The prices obtained for organic chickens are more than double the prices for conventional chickens, and are somewhat more stable than conventional prices as the supply and demand are relatively balanced. Chart 2.8 shows a comparison of the historical pricing of conventional chickens versus organic chickens based on USDA data collected from processors. Organic poultry represents approximately 1% of the poultry market.

Chart 2.8: Comparison of Organic Chicken Prices to Conventional Prices—$/lb



Source: USDA

III. Macro Economic Environment

III. Macro Economic Considerations

US demand for poultry products, as well as the prices for these products, has increased in an almost linear fashion over recent decades, with most projections indicating that this trend will continue. Production of poultry products has been designed to match demand and as a result long term pricing volatility has remained fairly low. Spikes or valleys in the market price for poultry are reasonably moderate when compared to many other commodities.

Feed, which is primarily comprised of corn and soybean meal, is the primary input cost for any poultry first processor. Because supply and demand for these commodities are impacted by multiple external factors, the price volatility of feed may be extreme when compared to the relative stability of chicken prices. Drought, flood and increasing demand for ethanol are just a few of the factors that have conspired in recent years to elevate feed cost to as much as 40 % of a poultry first processor's total expense. Though the market price for poultry is expected to continue to increase, recognizing the higher input costs involved, by comparison the poultry market price increase is expected to be slow.

The remainder of this section will outline in greater detail how these larger, external factors affect the poultry processor.

Market Prices

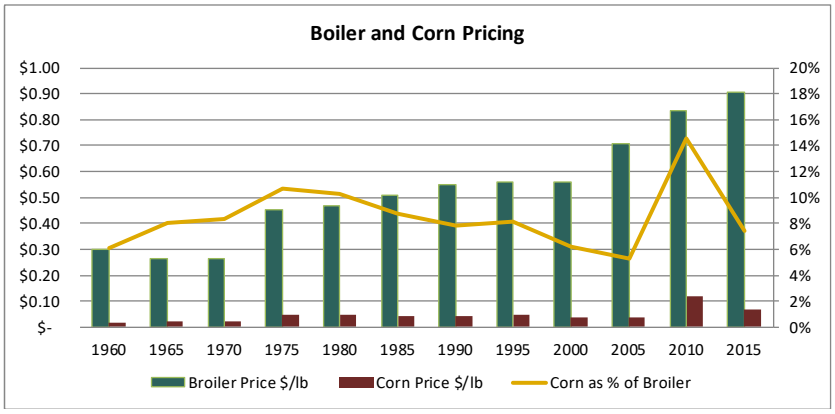
Market prices for broilers have risen over the years but have turned up more sharply since 2008, partially reflecting the increased cost of feed. Unfortunately for first processors, the increase in price trailed the increase in feed costs until recently First processors saw a sharp rise in feed costs in the past year and chicken prices followed, but at a much slower rate. Chicken price increases have continued to increase in the last couple of years, while feed costs have declined, improving the financial performance of chicken companies. Broiler prices over the past 50 years are shown in Chart 3.1.

Fresh slaughtered chickens must either be sold promptly or frozen, to prevent spoilage. There is practically no market for frozen WOGs which, when frozen, lose significant value while accumulating additional costs. In essence, supply and demand balance each day at some price. However, the number of chickens which will reach the market each day will have been determined two months earlier in the hatchery, and by subsequent production capacity of the processing plants.

Processing plants must run at capacity to maintain their lowest operating costs. In slow periods processors can reduce their bird placements at hatcheries, and close some processing facilities or processing lines in response to the imbalance between chicken prices and the cost of feed or demand. Pilgrims Pride Corporation closed its processing plant in El Dorado, Arkansas in order to reduce supply and raise the price of chickens in past years. On September 30, 2011, a federal judge awarded the contract growers for the El Dorado plant $26 million after finding that Pilgrims Pride was intentionally trying to manipulate the price of chickens in violation of the Packer's and Stockyards Act.

"Market prices" are posted daily by the Georgia Department of Agriculture (GA Dock prices) and through Urner Barry, a private company that gathers and publishes poultry data.

Chart 3.1: Boiler and Corn Pricing



Source: US Department of Agriculture

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Both GA Dock and Urner Barry contact poultry companies on a daily basis and gather offering prices to develop an average market price. These are published average prices and are only indicators of the price an individual company will receive.

There is no daily public market or auction for chickens. An entity wishing to buy WOGs would call a processor and negotiate a price based on the published price, with further price reductions expected based on quantity delivered. Most purchasing agents attempt to buy below the published price level.

Unlike the corn and soybean markets, which trade on the Chicago Mercantile Exchange ("CME"), no futures market exists for poultry. Accordingly, opportunities to lock in margins by hedging both feed inputs and chicken outputs do not exist.

Demand

The per capita consumption of chickens initially peaked in 2006 at just over 86 pounds per person per year and then declined for a few years due to higher prices. Consumption has been increasing since 2012 and is anticipated to reach 92 lbs/person in 2016, the highest ever attained.

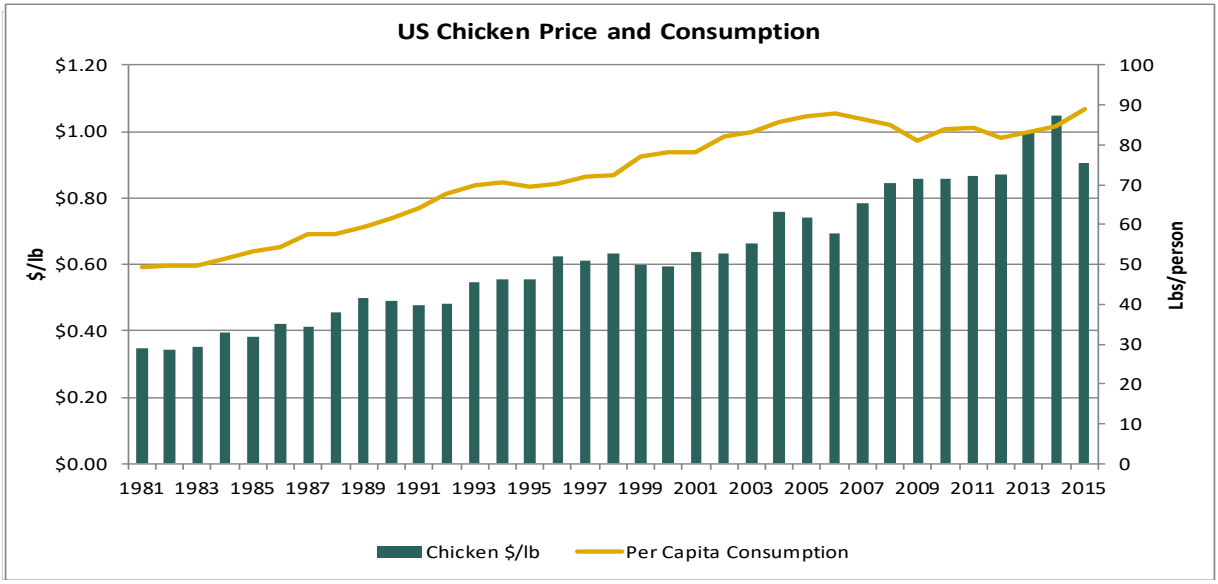
Chart 3.2 shows the per capita consumption of chicken over the past ten years.

Feed Costs

Feed costs represent the largest component of the cost to grow a chicken. Fully integrated processors have their own feed mills that blend corn and soybean meal, the two primary feed ingredients, with other additives and medications to produce their unique feed mix. Corn and soybean meal prices are the producer's key drivers of total feed cost.

Recently, feed costs have been a major problem for the industry. In Chart 3.3, corn prices were relatively stable from 1980 through 2005. However, in 2006 corn prices began to increase and, after a brief decrease in 2009, reached an all-time high in 2013, as world-

Chart 3.2: US Chicken Price and Consumption

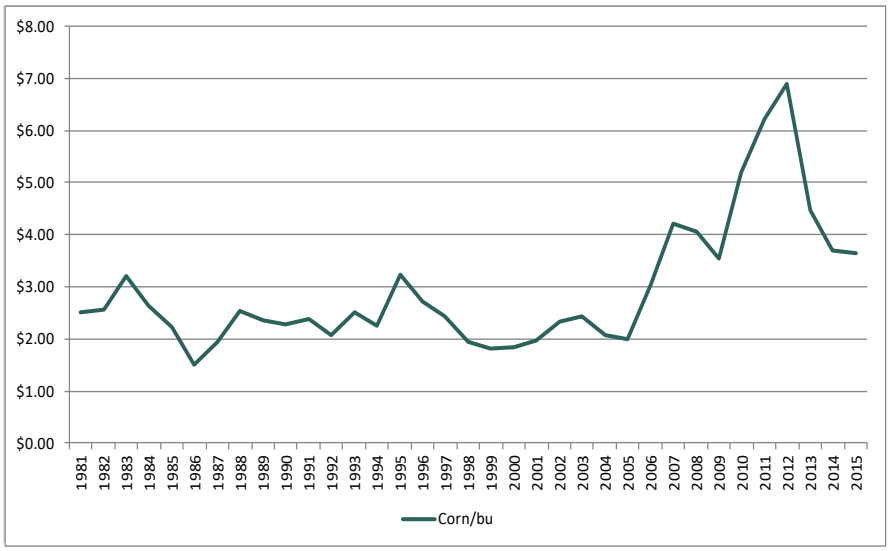


Source: National Chicken Council

III. Macro Economic Considerations

wide demand exceeded supply. After 2013, prices began to recede and are now almost 50% below the all-time high.

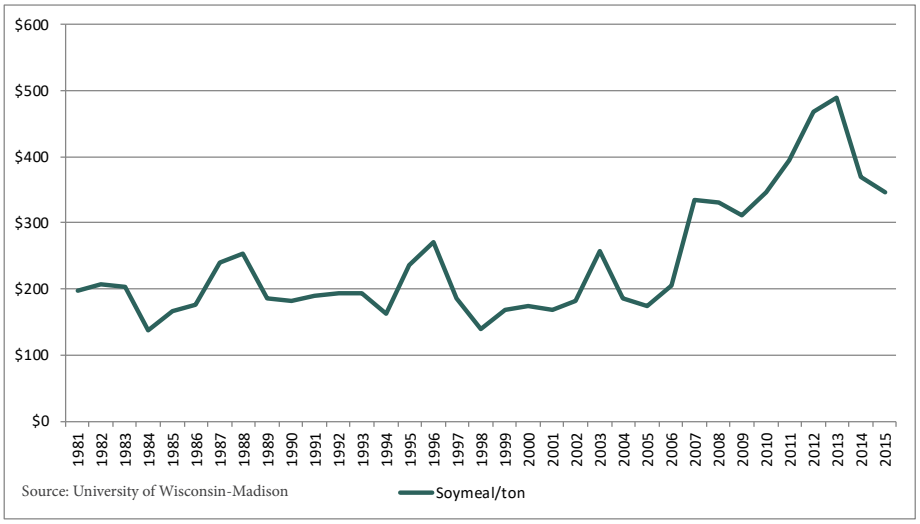
Chart 3.3: Corn Price Per Bushel



Source: University of Wisconsin-Madison

Soybean meal prices have risen since 2006, reaching record highs in 2013. The increase in soybean prices is related to the increase in the price of corn as users attempt to substitute more soybean meal, thus increasing the demand for soybeans.

Chart 3.4: Soybean Meal Price Per Ton



Source: University of Wisconsin-Madison

III. Macro Economic Considerations

Chart 3.5 converts corn (sold by the bushel) and soybean meal (sold by the ton) into feed costs per pound to allow an easier comparison. Soybean meal has historically sold for approximately twice the cost of corn when evaluated on a dollars per pound basis.

Historically feed costs, including medications and ingredients added to the corn and soybean meal, represented approximately 15% to 25% of the total producer costs. Currently, feed costs can represent almost 20% to 55% of total producer costs.

As a result of the increase in feed cost, the broiler price-feed cost ratio dipped significantly but have recovered in the last three years as evidenced in the following chart.

Chart 3.5: Corn and Soybean Meal Per Pound

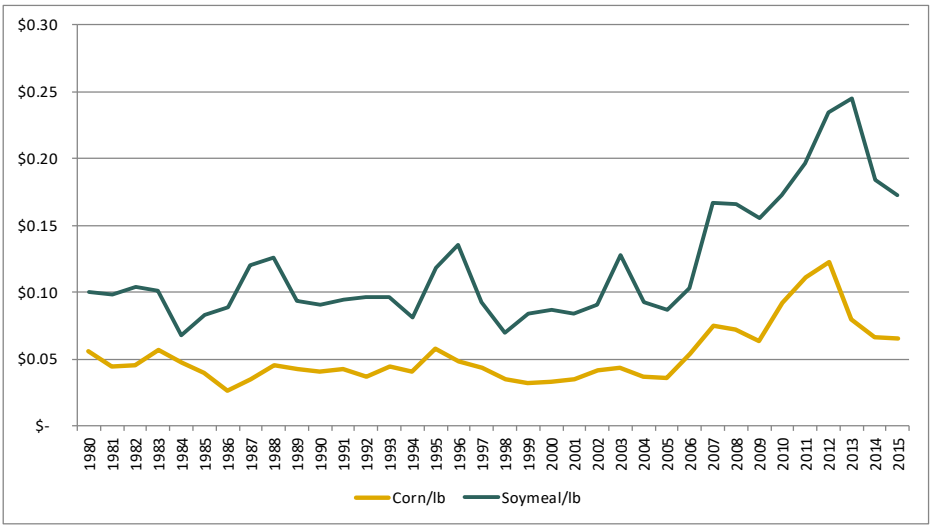
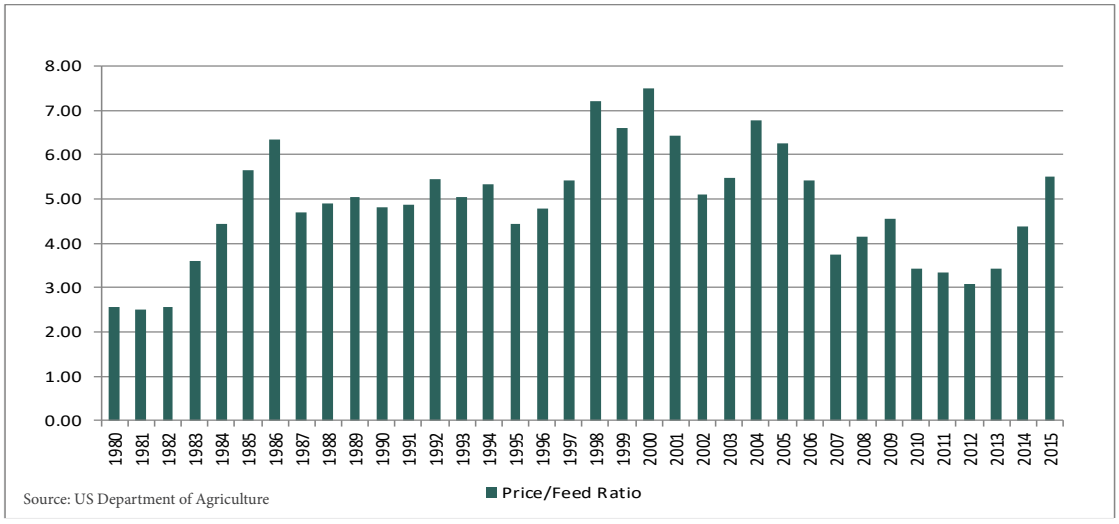


Chart 3.6 plots the average price of a finished broiler relative to the average cost of feed. In 1999 and 2000 when feed costs were at recent lows, the price received for a broiler was approximately seven times the feed cost needed to grow that broiler. The increases in feed costs drove the price received down to just three times the feed cost expended in 2012; however, the relationship between price and feed has now recovered to 5.5 times the feed cost.

53 billion pounds of broilers were brought to market in 2015. The current feed conversion ratio of 1.89 indicates that 1.89 pounds of feed will be required on average to produce one pound of live weight. Therefore about 100 billion pounds of feed was required in 2015 to bring these chickens to market. For every one cent increase in the price of feed, the annual impact on the broiler industry is approximately $1 billion of additional cost. Corn prices rose from 2005 through 2013 and the poultry industry suffered as a

Chart 3.6: Ratio of Broiler Price to Feed Cost



Source: US Department of Agriculture

III. Macro Economic Considerations

result because broiler prices trailed the input cost increases. Feed prices have come down the last two years and poultry companies are benefiting.

Ethanol Impact

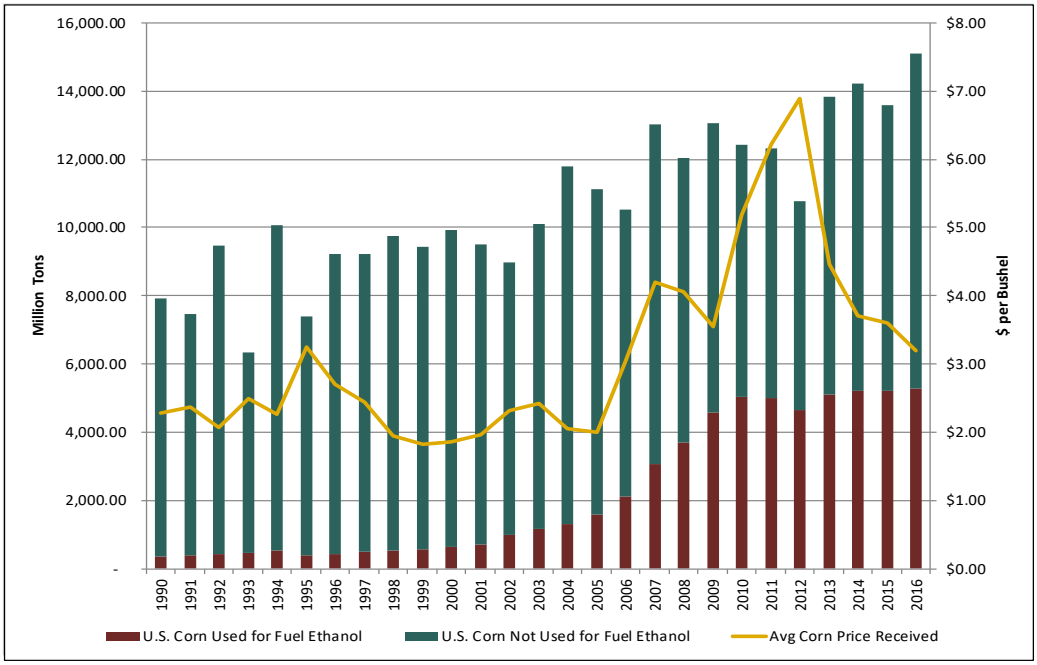
Much of the blame for the increased price of corn has been placed on the increase in the production of ethanol. While numerous factors impact the price of corn, such as the weather and crop yields, none have had the impact that has resulted from the increase in production of ethanol. Unlike the other factors affecting the market, ethanol production from corn is subsidized by the US government.

Charts 3.7 and 3.8 show the increase in the use of corn for ethanol and the resulting impact on the price of corn. Chart 3.7 shows the dramatic rise in the amount of corn used for ethanol from 2005 to 2010. Chart 3.8 similarly shows the direct movement between certain corn and ethanol metrics.

Corn is expected to remain the primary commodity used for US ethanol production, with about 35 percent of total corn grown in the US being diverted from feed use to ethanol production over the next decade, according to the USDA. However, the US Environmental Protection Agency ("EPA") in 2011 agreed to allow refiners to increase the corn-based fuel additive in gasoline to as much as 15 percent ("E15"), from 10 percent ("E10"), for vehicles in model-years 2007 and later. The initial attraction to ethanol was based on the $0.45 per gallon tax credit available to blenders of ethanol and the $0.54 per gallon tariff on imported ethanol used as fuel. These tax incentives have expired; however, ethanol is entrenched as a fuel additive and flex fuels with up to 85% ethanol are already in use.

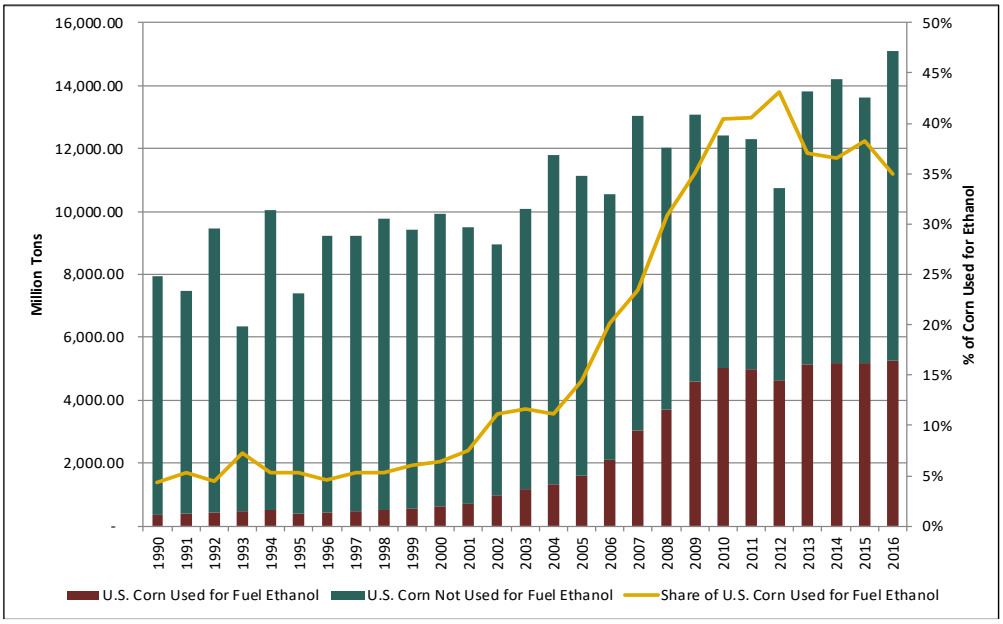
The Energy Independence and Security Act of 2007 set standards for the minimum amount of bio-fuels to be included in US transportation fuels through 2022. The 2008 level was set at 9 billion gallons, and will increase to 36 billion gallons by 2022. It is projected that there will be 12.6 billion gallons of ethanol produced in

Chart 3.7: Ethanol and US Corn Prices



Source: USDA

Chart 3.8: Percent of Corn Used for Ethanol



Source: USDA

2011 and a billion gallons of bio-diesel fuel produced. After 2016, increases in bio-fuels must be obtained from non-corn based sources.

The financial performance of the poultry industry will continue to be impacted negatively by the diversion of feed grains to ethanol production unless the cost of chicken increases to account for the increased feed costs for the chickens.

Additional information on the production of ethanol and the impact on corn prices is available from the Focus whitepaper, "Strategies for Lending to the Ethanol Industry," at www.focusmg.com/white-papers/ethanol-lending-strategies.

Futures and Price Hedging

Companies may purchase corn and soybean futures as a hedge against future price increases. There will always be risks in hedging, but the strategy can be used to lock in margins based on futures prices for a period of time. The risk is spot prices could be lower during the hedge period and higher margins could be obtained.

Poultry prices generally lag the rise and fall in corn prices. Poultry prices in relationship to feed costs improved as feed prices came down. Corn-based ethanol production has leveled off and the price of chicken now reflects the higher feed costs, therefore, profitability has returned to the industry.

Exports

Chicken exports account for almost 17% of the broiler production in the US, and have been relatively stable over recent years. The U.S is the second largest poultry exporter behind Brail. The export market is important for the poultry industry to maintain profitability, especially related to the chicken pieces that are less desirable to the US consumer.

In the United States, white meat is the preferred part of the chicken, while in other parts of the world, dark meat is preferred. US-based processors are able to find US markets for breast meat and wings, but often have difficulty selling the back halves(backs, thighs, drumsticks). These back halves are often sold at commodity prices. Russia and China were usually good export markets for dark meat and chicken feet, respectively.

III. Macro Economic Considerations

Russia was a major export market for U.S. broilers and dark meat. From 1996 through 2009, Russia averaged importing 1.6 billion pounds of chicken from the U.S annually. Trade disputes with Russia and the development of Russia's own poultry industry quickly diminished those amounts. From 2010 through 2014, the U.S. sent an average of 500 million lbs. per year to Russia. In 2014 Russia banned U.S. poultry products for a short period of time but quickly lifted the ban. By the end of 2014, Russia's poultry industry had matured to the point that they no longer needed to import from U.S. and have not imported any broilers since 2014.

As a result of the development of Russia's poultry industry and trade disputes with China, Mexico has become the major export market for U.S. poultry. Exports are important to the U.S. poultry industry. A reduction in exports could lead to over-capacity in the U.S. and apply price pressure to an industry that is highly sensitive to supply and demand balance. Russia is the biggest threat to U.S. export volume. The Russian poultry industry has grown rapidly in recent years and has reached a saturation point within its borders and realizes the need to expand exports in order to maintain stability in its own markets. Russia is aggressively trying to expand exports; however, at this point Russia does not yet have the expertise to make significant inroads.

The following chart shows the top 10 export destinations.

Outlook

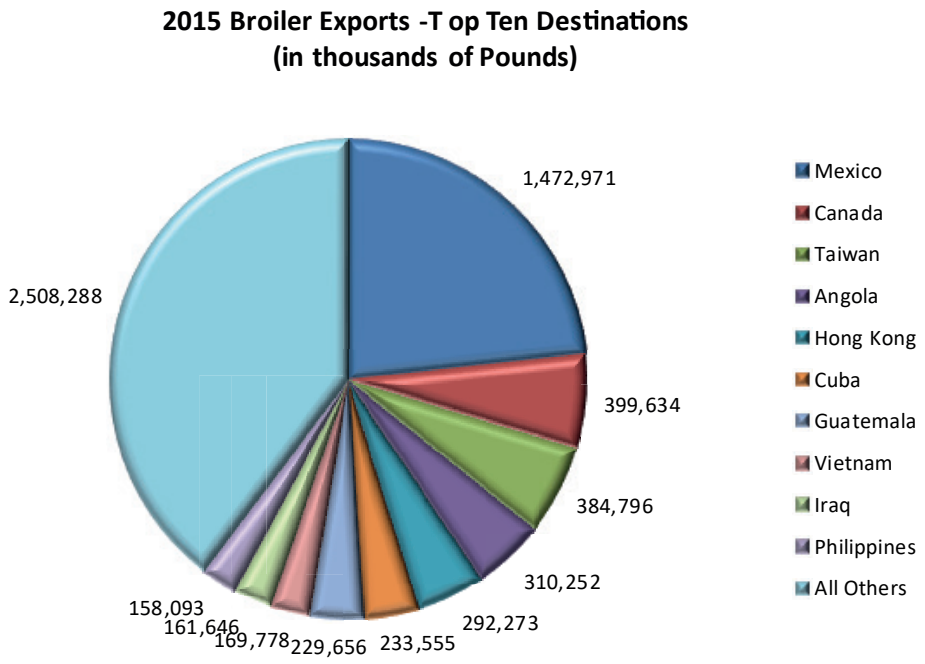
The USDA provides long term forecasts for many agricultural products including broilers and feed grains. The USDA forecasts are notoriously stable and linear in nature but provide insight in to future output and pricing based on historical trends and USDA economists' outlook.

For poultry, the USDA is projecting steady growth in output of broilers as well as steady growth in exports. The chart below provides the ten year outlook.

From a pricing standpoint, as previously mentioned, there has been an 18% price reduction over the last two years. The USDA is projecting pricing to drop another $.037 next year or approximately 4.5%. From there, the USDA forecasts prices to drop only slightly over the next four years before leveling off.

Additionally, the USDA is projecting growth in consumption of

Chart 3.9: 2015 Broiler Exports - Top Ten Destinations (in thousands of Pounds)



poultry from the current 89.1 lbs. per capita to 91.5 lbs. per capita in 2025.

The chart below shows the USDA forecast for pricing and consumption for the next ten years.

As discussed, feed prices are a primary factor in the financial performance of poultry companies. The USDA is projecting a small but steady rise in the price of soybeans, while the corn price projection is practically flat. The chart below shows the USDA's projected prices for corn and soybeans.

Based on USDA projections, poultry producers should see relatively steady input and output prices over the next ten years with a small but steady increase in product demand. In reality, grain and poultry prices are more volatile than the projections, as can be seen by the recent drop in poultry prices and the high corn prices in the first 3 years of this decade. It would not be surprising to see volatility in future pricing and supply of these commodities.

Summary of Macroeconomic Issues

1. Prices for finished whole birds or WOGs are set daily through the interaction of supply and demand, and are not controlled by individual poultry processors.
2. Changes in the market prices of chickens trail the changes in the price of feed, leading to poor financial performance during periods of rising feed costs and good performance in periods of declining feed costs.
3. Per capita consumption of chicken is sensitive to chicken prices and peaked initially 2006 and only exceeded that level in the last two years.
4. Feed costs rose through 2013 as a greater share of U.S. corn production has been consumed by the ethanol industry. Recently, greater plantings of corn acreage and improved yields have reversed that trend.
5. While USDA projections indicate feed prices will be steady, the price of feed grains is cyclical. According to the Cobweb Therom, farmers will plant more of a crop when prices are high and will continue to do so until over supply drives the price down. Once the price drops, farmers will shift to a more profitable crop. This pattern will continue to repeat itself and by extension will impact the poultry business in a similar cyclical pattern.
6. Exports are an important part of the US poultry market and historical trade issues with Russia and China impacted export sales in the past. Future export volumes are fragile and could be impacted by geopolitical issues.

IV. Processor Considerations

IV. Processor Considerations

This section of the Paper analyzes the opportunities available to poultry processing company management to directly affect the operational efficiency and profitability of their processing facilities.

First processors have a limited ability to affect changes on the price received for their end product. Chicken prices are market based, commoditized and are most heavily impacted by basic supply and demand. While little room exists for first processors to differentiate their products, further processing provides multiple avenues to add value and margin to the product through differentiation. Options for further processing include cutting up the chicken, deboning, blending and cooking the meat. These options will be discussed in further detail in this section.

First processors also have limited ability to affect change on the cost of primary inputs such as feed costs, which represent up to 25% of total production expense currently. Even more than the prices received for the finished chickens, feed input costs are based on commodity pricing.

Corn and soybean meal account for approximately 90% of total feed costs, and both products are publicly traded on the Chicago Mercantile Exchange. The prices paid for corn and soybean meal are determined by supply and demand and can be far more volatile than the prices received for chickens. During the recent years prices for these commodities reached historical high levels and only receded in the past couple of years.

Because of the limitations described above, poultry processors must focus on maximizing efficiency in the first processing stage, and then on the highest margin differentiation in any further processing stages. Numerous metrics and efficiency tools will be outlined within this section to assist in the understanding of this process.

Feed to Chickens

Most major companies in the poultry industry are fully integrated, meaning they control their own genetics, have their own hatcheries, and their own feed mills and feed formulas. Once the chicks are hatched, the chicks are placed with contract growers who own the chicken houses and raise the chickens to the harvest date, commonly referred to as the grow-out date. The processor also provides the feed to the contract growers, who are generally paid by weight of harvested chickens.

As previously mentioned, a key component of modern chicken production is the Feed Conversion Ratio (FCR) that measures how many pounds of feed are required to produce one pound of live bird weight.

The feed conversion ratio and the average live weight of chickens have changed over the past 75 years, even though the average days to market has been reduced to 48 days. During this same period, the mortality rate has dropped from 18% to 4.8%.

The increasing live weight being produced can be partially attributed to higher feed costs. As processors try to improve margins, alternative methods of cost reduction are sought. The speed at which chickens are processed is controlled by the USDA, but the weight of each chicken is not. Plant cost per pound may be reduced by running larger birds through the facility. The level of the feed conversion ratio is a product the genetics of the chick, the feed formula and the conditions in which the bird is grown. Processors carefully monitor the performance of their contract growers, who are responsible for the growing conditions.

An important factor in the industry, and to the profitability of the processor, is to achieve target weights. Each processor will have a specified target weight for each flock of live birds based on their customers' demands. Retail weights are generally higher than foodservice weights as restaurants desire as many pieces per pound as their customers consider reasonable.

Source: National Chicken Council

IV. Processor Considerations

If graphed, the weights of harvested birds would form a bell shaped curve as shown in Chart 4.2

In this example, the target live weight is 4.5 pounds and the actual weights achieved will vary around that weight. The processors work toward the tallest and narrowest bell curve to maximize value of the harvested birds. Birds that fall within a specific target weight range can be sold to customers at a higher value, while birds that fall outside of the target weight range are generally sold at commodity market prices.

At the sixth week of their life, birds are growing rapidly and a one day delay in harvest can skew the bell curve. Harvest delays can occur occasionally due to weather problems or processing facility issues. While these types of delays may be unavoidable at times, the financial impact to the processor increases financial performance risk.

Once birds reach their harvest date, a team of chicken catchers enter the chicken houses at night when the birds are calm, and bring the birds out to cages for transport to the processing facility. In the past few years, automated chicken catching machines have been used, reducing the number of catchers needed and improving the harvest by reducing bruising.

A low Feed Conversion Ratio and tight range of average weights of birds improve the processor's financial performance, and are the result of diligent efforts in a company's hatchery, feed mill and grow-out processes.

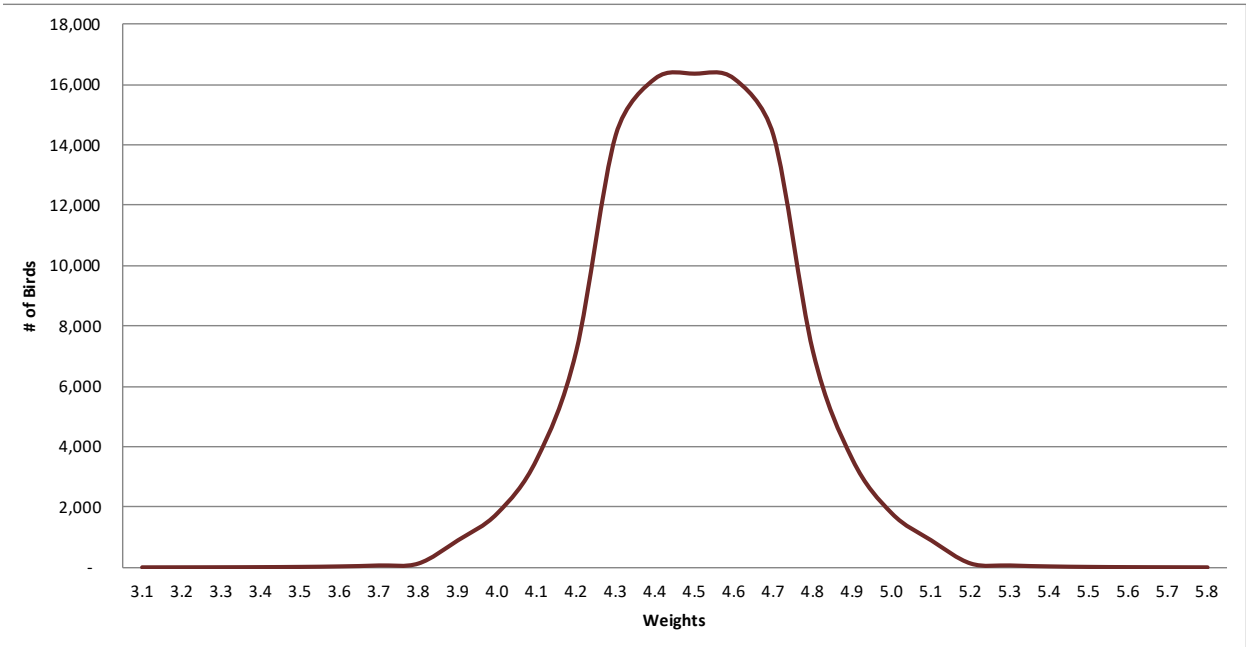
Hatchery

In the hatchery, companies are concerned with genetics of the birds and monitor the Feed Conversion Ratio, mortality rate, ultimate yields of dressed weight to live weight, breast weight to dressed weight, as well as the yield of other chicken parts.

Many hatcheries perform in ovo inoculations, applying medications to the chicks prior to hatching. Monitoring the cost and effectiveness of the medications on weight and mortality rates is an important performance indicator.

Normal cost factors related to labor, overtime and utilities, etc. must also be monitored as an indicator of performance.

Chart 4.2: Weight Distribution of Harvested Birds



IV. Processor Considerations

Key metrics for the hatchery portion of the processing operation include the percentage of eggs that hatch and the Feed Conversion Ratio.

Feed Mill

As previously mentioned, many processors own their own feed mills to control their feed formulas and obtain lowest cost feed mixtures. As with the hatchery, processors monitor performance through live weights and yields. The primary measure of the feed formula's effectiveness is the Feed Conversion Ratio (FCR)—the pounds of feed required to produce a pound of chicken. The industry average FCR is currently at 1.92 pounds of feed to produce a pound of chicken. An FCR ratio greater than 1.89 would require a processor to adjust their feed formula to improve performance above the industry average. Other factors, such as unusually hot or cold weather during the grow-out process, could also negatively impact a first processor's FCR.

In addition to the FCR, the measurement of feed cost is also important to the financial performance of the processor. The cost of corn and soybean meal is a major component of cost, with effective sourcing and purchasing of the feed components being critical to maintaining lowest cost formulations. Market timing, hedging and minimizing transportation costs are all important tools in maintaining low feed acquisition costs.

As with all processes, it is always important to monitor and minimize labor and other operating costs.

Grow-Out

Processors contract with farmers to grow their chickens. Each processor will have their own set of criteria for the growers and the quality of their grow-out houses. It is important for grow-out houses to have heat and ventilation (usually large fans) to maintain optimal growing conditions for the chickens. The FCR, weight distribution and mortality of the chickens may be impacted by swings in temperature and other conditions, such as lighting, cleanliness and over-crowding.

Processors carefully monitor the performance of their growers, with the payments to growers often being performance-based.

The key performance measures used with growers are 1) FCR, 2) WOG yield (dressed weight to live weight), 3) mortality, 4) feed usage, and 5) condemnation rate once the birds reach the evisceration line. Birds may be condemned for bruising or other skin conditions that result from lack of cleanliness during the growing period.

In winter months, growers must maintain a minimum temperature in their grow-out houses. In most parts of the country, maintaining temperatures in the winter months require heating, which requires fuel. Generally chicken houses are heated with propane heaters, therefore propane fuel usage is a key cost consideration. Depending on the company and the grower contract, the processor may be responsible for providing the fuel used to heat the chicken houses and for monitoring fuel costs. If the processor does not provide the fuel, the processor runs the risk of the grower lowering the temperature in the chicken house to save costs, which could negatively impact FCR and mortality rates.

Packers and Stockyards Act (PASA)

Stakeholders need to be aware that payments to growers are covered under the Packers and Stockyards Act (PASA) and must be made within fourteen days of the harvest. Payments are occasionally audited and processors are fined if timely payments are not made. Additionally, unpaid payments may prime a lender's lien on the assets of the processor.

Processing

Movement of the flock during processing is outlined in Figures 4.3 and 4.4 on the following pages. Processing facilities have two primary steps, slaughter and evisceration. The cages containing chickens from the growers are unloaded from trucks on to a conveyor belt where the cages are opened and the chickens are hung on moving overhead shackles by their feet. The chickens are then run through an electrified mist to stun them and raise their heart rate just prior to the slitter removing the heads. The carcasses are then scalded and de-feathered and ready for the evisceration process.

IV. Processor Considerations

During the evisceration process, the liver, heart, guts and gizzards are harvested and can be sold separately or with the birds. The remainder of the guts are captured as "offal" and sold for rendering.

Processors generally run two full production shifts and then are required by the USDA to perform a complete cleaning of the facility during the third shift. The USDA tests the facility each day and releases the plant to resume production. The relationship of plant management with the USDA inspectors impacts the plant's performance.

At 120 birds per minute (USDA allows up to 140 birds per minute) for two production shifts with 90% up-time, a single chicken processing line produces up to 103,000 birds per day. A plant with three evisceration lines produces over 300,000 birds per day. With an average growth period of 48 days from birth to market, that one facility with three lines would likely have approximately 14 million birds in the field at some stage of grow-out at any time. Industry-wide, there are over 1.5 billion chickens in the field at all times.

> The Packers and Stockyards Act was passed in 1921 in response to a finding of anti-competitive behavior of meat packers. The purpose of the Packers and Stockyards Act is "to assure fair competition and fair trade practices, to safeguard farmers and ranchers...to protect consumers...and to protect members of the livestock, meat, and poultry industries from unfair, deceptive, unjustly discriminatory and monopolistic practices" according to the USDA brochure that provides a synopsis of the Act. The Act has been supplemented or amended 24 times since 1921, most recently in November 2010. Over the years, the Act's scope has grown to regulate the activity of livestock dealers, live poultry dealers, swine contractors as well as the original meatpackers. In 1987, the Act was amended to provide trust protection to live poultry sellers and contract growers in the event of nonpayment for poultry by live poultry dealers and it is under this provision that processors are audited regarding timely payment to growers. By giving contract growers trust protection, in a bankruptcy filing payments due to contract growers become a likely priority claim.

Once chicks are hatched, they are considered to be work-in-process inventory and the production schedule is set for the next six to seven weeks.

The slaughter and evisceration plants are manufacturing facilities with normal manufacturing considerations of throughputs, labor costs, overtime rates, utility costs, etc. Processors must have systems in place to monitor and control these costs and throughputs.

Processors should examine costs on a per-head processed basis, a per-pound of finished weight basis, or both.

As previously mentioned, the USDA controls the line speed in evisceration plants based on the number of birds that inspectors can visually inspect. Most facilities often have three or four USDA inspectors per evisceration line, depending on the equipment used and the line speed being run. The inspectors are USDA employees, however the processor pays a fee for inspection.

Each processor must have a USDA approved HACCP plan. HACCP stands for Hazard Analysis and Critical Control Points. Under the USDA HACCP program, a processor must identify potential hazards to food safety in their process and develop a protocol to eliminate the hazard and monitor the effectiveness of the protocol. The HACCP Plan is a formal written document that outlines the critical control points and the data that will be gathered to monitor the effectiveness of the elimination program. The USDA regularly reviews the data to determine if the processor's HACCP plan is effective. If a USDA inspector finds a failure in the HACCP plan, a formal Noncompliance Record ("NR") is issued. An NR is a serious problem for a processor and must be dealt with immediately via a written change to the HACCP plan to eliminate the problem going forward. If an HACCP failure occurs, it can result in downtime until problems are corrected.

Most modern plants are allowed to run birds at up to 140 birds per minute per line. The USDA proposed to move the speed up to 175 birds per minute, but then withdrew the proposal based on food safety concerns. The greater line speed results in higher throughput for the processor, and a lower per unit operating cost.

WOG yields and condemnation rates are monitored as critical per-

Continued on page 30

FIGURE 4.3: FLOCK MOVEMENT

1. Transported by converted buses
2. Transported in cages by semi's
3. Transported by refrigerated egg trucks

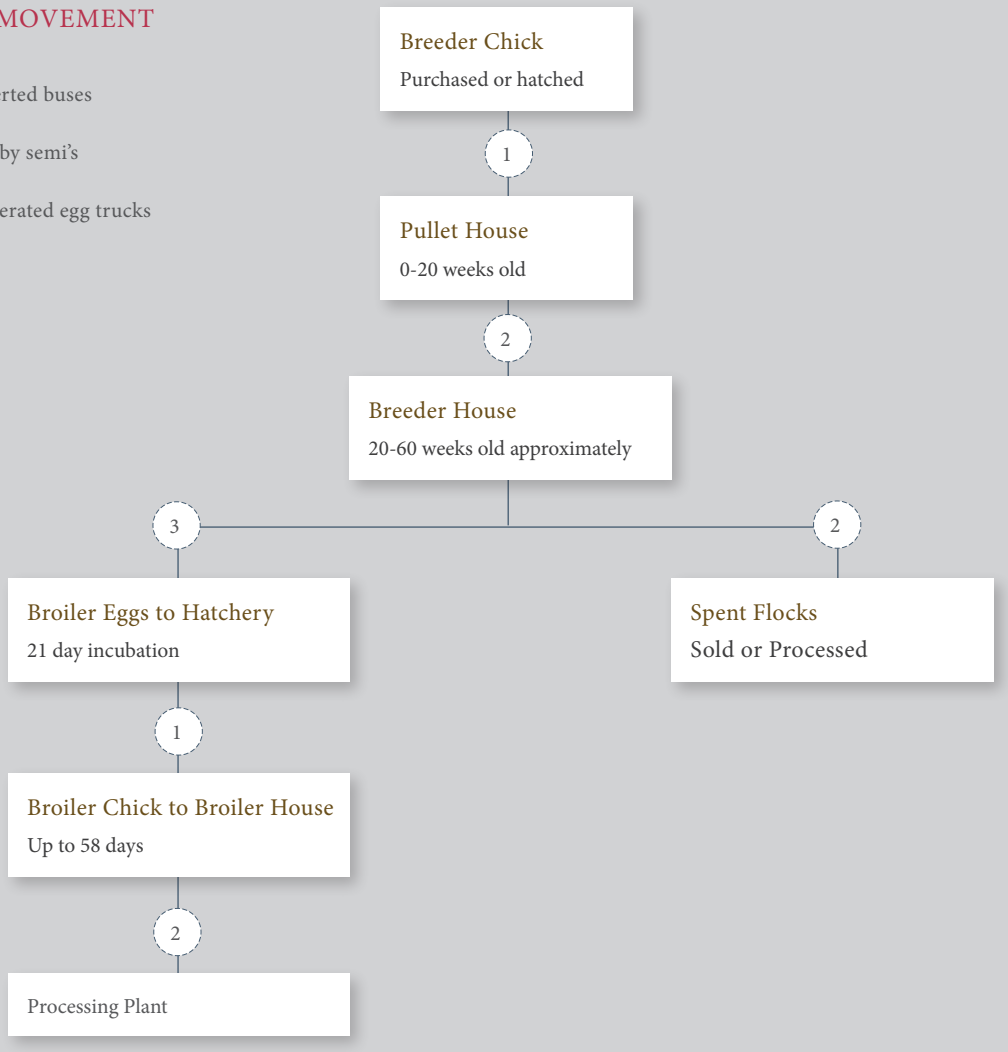
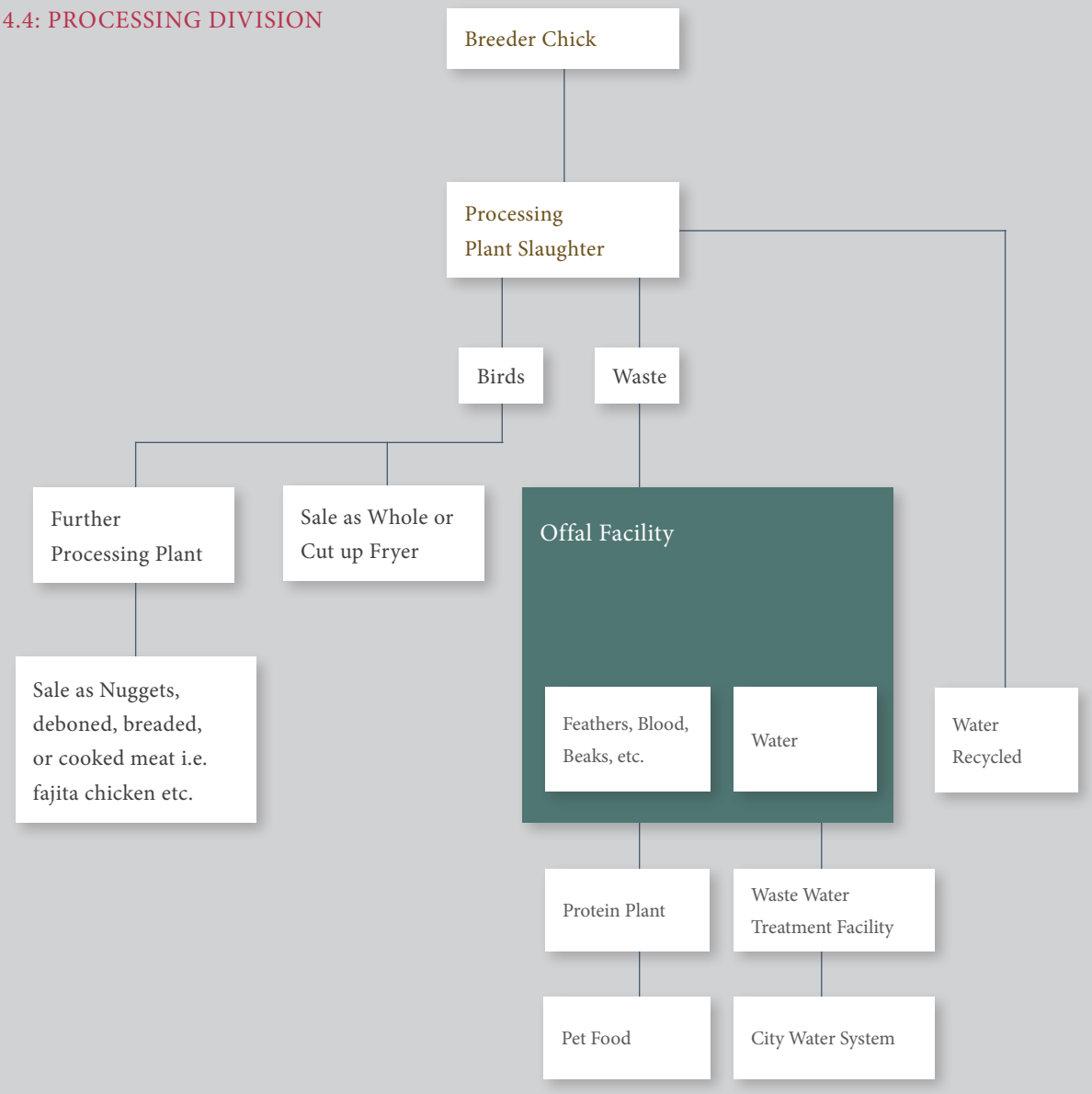


FIGURE 4.4: PROCESSING DIVISION



IV. Processor Considerations

formance measurements, as is the effective harvesting of hearts, gizzards and livers which are often sold to pet food manufacturers.

The key metric in the processing plant is throughput. Since the production lines are generally running at 90 birds per minute, downtime is a key determinate of throughput and, therefore, a key performance measurement in a processing plant.

Production lines in the manufacturing plant can be slowed or shut down for normal manufacturing problems related to maintenance or even personnel issues. In a poultry processing plant, the lines can also be slowed or stopped by a USDA inspector. If a USDA inspector sees too much bruising, too many feathers, or other problems with the chickens or the process, the inspector may slow down the line for better inspection or stop the line to have management resolve the problem.

Also, since each plant goes through a thorough cleaning each day, there are standard pre-operation ("pre-op") procedures and inspections that are required before a plant begins production each day. Not completing the pre-op in a timely manner or failing an inspection can lead to a delayed start-up and a shortened work day. A plant's relationship with the USDA inspectors impacts the production efficiency of the plant.

To improve throughput, processors sometimes look to growing larger birds, which results in more weight through the plant while maintaining the same line speed. While the number of pounds through the plant can often be increased, the strategy is not quite that simple.

In order to run larger birds, equipment must be recalibrated to properly handle larger birds. For example, the equipment that removes the feathers is designed for a certain size bird and could damage a larger bird, which in turn, creates more condemnation. Also, generally speaking, a plant makes its profit from birds sold at a higher price, not at commodity bird prices.

Generally, birds draw a slightly higher price because they are sized for a particular customer. Altering the size may reduce the value of those birds or move them into the commodity category. The size of the birds through a plant is often dictated by customer demand. If most of the production is already being sold in the general commodity market and the plant equipment is able to handle larger birds, the strategy to increase bird size could produce positive results for that plant.

As was shown in Chart 4.1, the live weights of birds have been increasing over the years as manufacturers have grown larger birds to gain better plant efficiencies.

Since the slaughter and evisceration process involves knives, cutting equipment and a wet environment safety is also an important consideration in minimizing downtime and workers compensation insurance costs.

Performance Measurements

In the first processing stage, it is important to use a standard of measurement for comparative purposes. Companies that perform first processing will use both a per-head measurement and a per-pound of finished weight measurement for cost comparisons. The finished product is sold in pounds; therefore, cost measurements need to provide comparative cost per pound results.

Key indicators for the processor or its stakeholders to monitor include the following metrics:

- Hatch percentage
- Corn and soy bean meal pricing
- Feed conversion ratio
- WOG yield (WOG weight divided by live weight)
- Mortality
- Condemnations
- Throughputs—Number of head and/or number of pound finished per shift and per day
- Downtime by cause (start-up, mechanical, USDA, other)
- Labor cost per finished pound
- Overhead per finished pound
- Freight cost per finished pound

IV. Processor Considerations

- Total cost per finished pound
- Average selling price per pound
- % sold as commodity chicken
- Customer profitability
- Number of USDA Noncompliance Records issued

Focus Poultry Performance Matrix©

Because a first processor has only a limited ability to affect input costs and the prices received for its output, the viability of a first processor is wholly dependent upon efficiency. It is critical that producers and stakeholders are able to quickly and easily monitor this efficiency as well as resulting profitability of the operations, along with the ability to service existing debt.

For this reason, Focus has developed an interactive Focus Poultry Performance Matrix© (the "Focus Model" or the "Matrix"), designed to evaluate key performance metrics, including:

- Market Price Received
- Feed Conversion Ratio
- Feed Costs
- Other Variable Costs
- Fixed Costs
- Amounts Remaining for Debt Service

What-if analysis capabilities are available in the model to assist poultry processors, their legal advisors, and their stakeholders in assessing the bottom line impact from changes to feed cost per pound, changes to feed cost per live pound, changes in broiler prices, changes in labor costs, etc.

A results-oriented format serves as a basis for future budgets, allowing management to focus on targeted financial goals required to achieve desired cash flows to support fixed costs and debt service.

The Focus Poultry Performance Matrix©, shown on the following page, is scalable to any size operation and gives immediate feedback to both processors and their stakeholders regarding what steps must be taken and/ or what market movements are needed to achieve success and enable repayment of debt.

The Focus Poultry Performance Matrix© allows the poultry processor or its stakeholders to determine the range of viable performance options both for covering fixed costs, and for providing an ability to generate EBITDA to service debt. For example, once data is gathered and input, the amount of "yellow" colored cells represents combinations for generating positive EBITDA, whereas "red" cells are non-viable options.

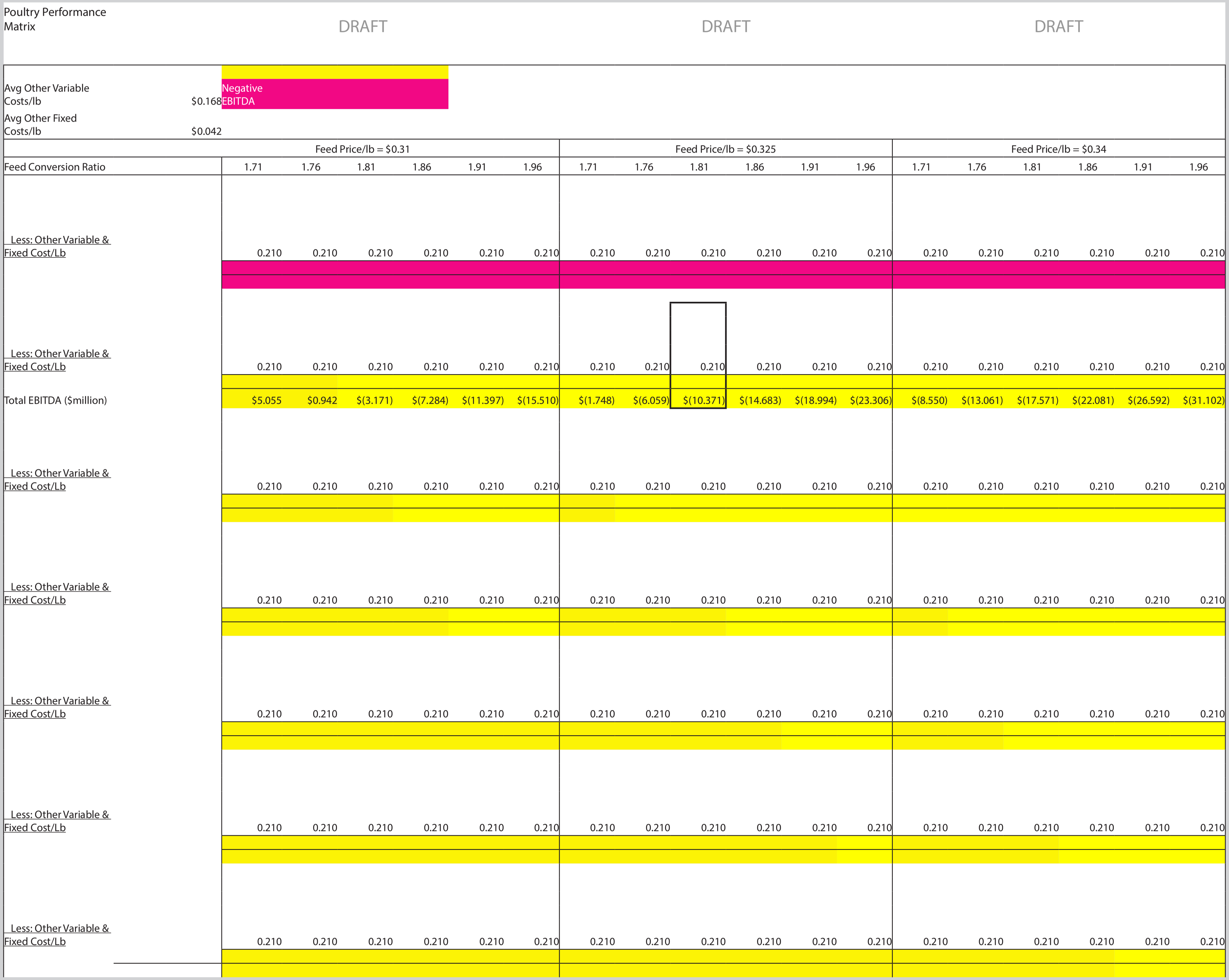


FIGURE 4.5: Focus Poultry Performance Matrix©

Poultry Performance Matrix				DRAFT						DRAFT						DRAFT			
Avg Other Variable Costs/lb	$0.168	Negative EBITDA																	
Avg Other Fixed Costs/lb	$0.042																		
		Feed Price/lb = $0.31						Feed Price/lb = $0.325						Feed Price/lb = $0.34					
Feed Conversion Ratio		1.71	1.76	1.81	1.86	1.91	1.96	1.71	1.76	1.81	1.86	1.91	1.96	1.71	1.76	1.81	1.86	1.91	1.96
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Total EBITDA ($million)		$5.055	$0.942	$(3.171)	$(7.284)	$(11.397)	$(15.510)	$(1.748)	$(6.059)	$(10.371)	$(14.683)	$(18.994)	$(23.306)	$(8.550)	$(13.061)	$(17.571)	$(22.081)	$(26.592)	$(31.102)
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210

IV. Processor Considerations

Chart 4.6 below is a magnified view of the previous Matrix output using data from a poultry producer reviewed by Focus. This producer was operating at a negative EBITDA exceeding $10 million per year based on a Feed Conversion Ratio of 1.98, chicken prices of $0.89/lb and feed costs of $0.312/lb.

The Matrix outlines for the producer and its stakeholder the internal and external changes that must be realized in order to achieve positive EBITDA, and thus be able to service debt. For this producer to achieve positive EBITDA under its current operating cost run rate, it would need to reduce its FCR from 1.98 to 1.88 and realize an increase in chicken prices from $0.89/lb to $0.91/lb. This movement is shown by the data highlighted in the blue circles, moving from top right to bottom left.

To produce the Matrix shown in Chart 4.6 below, a substantial amount of financial and operating performance data must be gathered and analyzed. Typically, financial performance by cost line item would be assessed over a two to three year period, and assumptions would be developed related to future performance.

Table 4.7 to the right summarizes some of the data which must be analyzed and shows how the detailed information is converted to usable Focus Poultry Performance Matrix© data. For example, other variable costs include repairs and maintenance, utilities and a variety of other expense. After a line item review of these expenses, the variable costs per pound may be estimated to arrive at the input summary show in the table.

Table 4.7 Focus Poultry Performance Matrix© Data

Poultry Performance Matrix©	
Lb Chicken	265,000,000
Total Chickens/Yr	58,888,889
Avg Chickens/Day	161,339
Avg Unit Price/lb	0.848
Avg Chicken Weight (lbs)	4.500
Pounds of Feed	480,000,000
Feed Mix $/lb	$0.325
Feed Conversion Ratio	1.811
Feed cost/live pound	$0.589
Avg Labor/live lb	0.088
Avg Other VC/live lb	0.168
Avg Other FC/live lb	0.042
Feed Conversion Ration increment	0.050
Feed Price/lb Increment	0.015
Chicken Price Increment	0.020

Chart 4.6 Magnified View of Focus Poultry Performance Matrix©

Poultry Performance Matrix

DRAFT

DRAFT

Avg Other Variable Costs/lb	$0.168	Negative EBITDA											
Avg Other Fixed Costs/lb	$0.042												
		Feed Price/lb = $0.31						Feed Price/lb = $0.325					
Feed Conversion Ratio		1.71	1.76	1.81	1.86	1.91	1.96	1.71	1.76	1.81	1.86	1.91	1.96
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Total EBITDA ($million)		$5.055	$0.942	$(3.171)	$(7.284)	$(11.397)	$(15.510)	$(1.748)	$(6.059)	$(10.371)	$(14.683)	$(18.994)	$(23.306)
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210
Less: Other Variable & Fixed Cost/Lb		0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210	0.210

IV. Processor Considerations

Adding Value through Further Processing

Most chicken processors began as first processors producing WOGs and selling them at the highest prices they could achieve in the market. Over the years, first processors were able to earn a sufficient margin simply processing chickens, although profitability suffered in down market cycles and thrived in good market cycles.

Experience taught many first processors that additional margin was available if their operation was expanded to include further processing of chickens. Further processing includes cutting the chicken into individual parts, deboning parts, freezing and cooking chicken meat.

Once first processors begin further processing, the chickens are no longer homogenous since each performs various levels of further processing for different customer bases. While each processor faces many of the same risks, such as feed costs, mortality and yields, each also has its own unique risks based on the level of further processing and the customer base it has established.

Further processing adds value to the chickens produced and may help provide cash flow stability at times when feed and chicken prices have moved in opposite directions. Further processing also allows for product differentiation and branding opportunities that do not exist at the first processing level.

Large processors have research and development ("R&D") departments and, in conjunction with equipment manufacturers, are always seeking ways to gain efficiencies, throughputs and profits. Different equipment and different methods may deliver greater yields. For example, some processes allow companies to grow larger birds and slice breasts horizontally to increase the output of individual breast pieces for the foodservice industry. Other processes or equipment may improve sizing and reduce trim quantities, or may improve freezing times to reduce water weight loss.

Further processing is a manufacturing operation and throughputs are an important measurement of performance. Units produced per hour or "line speed" must be measured at each step of the operation, whether it is a simple cut-up operation or complete cook and pack-out line. In first processing, the line speeds are limited by the USDA, while in further processing, line speeds are controlled by the ability of the equipment and employees to complete the task. When cooking, line speeds are generally controlled by the equipment's ability to cook and freeze the product.

Table 4.8 below shows the potential impact on a company's gross margin percentage based on the same product run at different line speeds.

Cut-up

The most basic level of further processing is cutting the chickens into component parts. This could mean cutting the chicken into 9 pieces—2 breast halves, 2 wings, 2 drums, 2 thighs and 1 back, or it could be as simple as cutting the chicken in half. Adding a cut-up line has become essential to a processor since there is not a market for frozen WOGs, while there is a market for frozen chicken parts. Since a processor must do something with every WOG every day,

Table 4.8: Impact of Line Speed on Gross Margin

Impact of Line Speed on Gross Margin										
Pounds per hour	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,500	6,000
Selling Price/lb.	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75	$1.75
Raw Materials/Lb.	$0.87	$0.87	$0.87	$0.87	$0.87	$0.87	$0.87	$0.87	$0.87	$0.87
Other Variable Costs/Lb.	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
Fixed Overhead Absorption/Lb.	0.53	0.40	0.32	0.27	0.23	0.20	0.18	0.16	0.15	0.13
Gross Margin/Lb.	$0.20	$0.33	$0.41	$0.46	$0.50	$0.53	$0.55	$0.57	$0.58	$0.60
Gross Margin Percentage	11%	19%	23%	26%	29%	30%	32%	33%	33%	34%

IV. Processor Considerations

cutting up excess production and freezing it is an option.

Chicken meat is divided into dark meat and white meat. The front half of the chicken is considered the breasts and wings, both white meat, while the back half consists of the drums thighs and backs, all dark meat. In the poultry industry, the front half of the chicken is simple called the "fronts" while the back half is referred to as the "saddle".

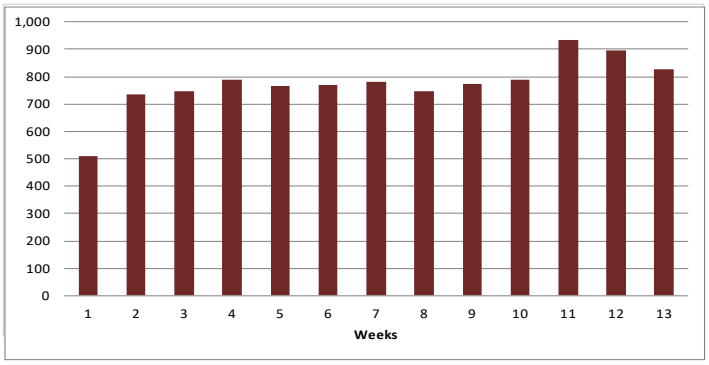
It is important for processors to develop markets for their further processed chickens. Whole birds, nine piece cuts and individual pieces are all available for sale in retail outlets. Individual parts are often frozen and put in bags for the retail market, such as a five pound bag of wings or drumsticks, known as Individually Quick Frozen ("IQF") parts.

There are both manual and automated cut-up lines in processing plants. Once again, the key metric is throughput, or pounds produced per hour. Downtime is another key factor that impacts throughput. Some processors measure their throughputs by pounds per man hour.

Chart 4.9 above is an example of tracking of the cut-up process of a further processor over a thirteen week period.

Also in the cut up process, yield of cut-up pieces to WOG weight

Chart 4.9: Cut-Up Line Pounds per Manhour



is a key measurement. During the cut-up process, birds lose fluid or weight, mis-cuts occur, and other damage to the chicken meat may take place. There are solutions to these potential losses—for example, freezing the parts quickly after cut-up helps minimize fluid loss.

Table 4.10 below shows a representative yield of parts to WOG weights in a chicken. Each processor would be attempting to reduce the cut-up loss and increase the breast yield.

Automated lines are faster, but generally experience more downtime and somewhat lower yields than manual lines. Manual lines have a greater safety risk and higher workers compensation insur-

Chart 4.10: Bird Yields at Various Weights

Bird Yields at Various Live Weights					
Live Bird Weight in Pounds	4.00	5.00	6.00	7.00	8.00
Giblet as % of Live Weight	6.5%	6.5%	6.5%	6.3%	6.2%
Offal as % of Live Weight	22.2%	19.6%	19.6%	16.0%	15.4%
WOG Yield from Live Weight	71.3%	73.9%	73.9%	77.7%	78.4%
Yield of Parts from WOG Weight					
Split Breast Weight	41.3%	39.8%	41.7%	42.2%	44.2%
Wing Weight	10.9%	10.7%	10.4%	9.9%	9.7%
Front Half Cut-up Loss	3.6%	4.9%	4.0%	3.5%	3.0%
Whole Leg Weight	30.9%	31.8%	31.2%	30.6%	31.2%
Back Weight	9.8%	7.9%	8.6%	10.4%	8.8%
Back Half Cut-up Loss	3.6%	4.9%	4.0%	3.5%	3.0%
Total Yield	100.0%	100.0%	100.0%	100.0%	100.0%

ance cost. For example, carpel tunnel injuries due to the repetitive motions required during the cut-up process are common on a manual line. Training is an important method to mitigate this risk.

Adding a cut-up line provides the processor with additional options to add value to their production.

Deboning

The next step in further processing is deboning the meat. Processors generally debone breasts and thighs, and often make decisions on the quantity of WOGs to debone based on current market conditions. The Georgia Department of Agriculture publishes market prices daily on whole birds, as well as parts, including boneless breasts and boneless thighs. A processor is able look at the potential additional margin available on parts or deboning, and is able to make daily processing decisions accordingly.

The primary market for deboned meat is the retail market, however further processors that will be freezing or cooking the meat are also potential customers for the deboned meat.

Throughputs are key to maintaining low processing costs, however deboning yields are also very important. Harvesting as much meat from the bone as possible is cost effective.

Table 4.11 below shows typical yields of deboned meat compared to the WOG weight. Processors would be attempting to maximize these yields.

During deboning a processor may be trying to achieve a specific weight; therefore, it is necessary to trim individual pieces of meat to a certain size. The excess trimmed meat also has a market value, but its value is significantly below the value of a boneless breast. Trim percent is another element of yield on the cut-up line and relates directly to the importance of bird size as it leaves the grower.

Most often, deboning lines are deboning breast meat. Thighs are also deboned; however drumsticks are rarely deboned due to yield issues. Once deboned, the processor is left with the carcass of the chicken, known as "frames" or sometimes as "cages". The frames or cages are run through a machine to separate any remaining meat from the bone. This is generally accomplished by forcing the cage through a sieve that extracts the remaining meat and bone marrow and discards the bone material. This product is called Mechanically Separated Chicken or "MSC".

MSC is a red paste-like substance that is used as an extender in products such as chicken nuggets and patties, and in pet food. To emphasis the importance of deboning yield, in October 2011 meat left on the bone that becomes MSC sells for between $0.10 per pound and $0.25 per pound while boneless breast meat sells for

Table 4.11: Deboning Yields at Various Live Weights

Deboning Yields at Various Live Weights					
Live Bird Weight in Pounds	4.00	5.00	6.00	7.00	8.00
Giblet as % of Live Weight	1.6%	1.3%	1.1%	0.9%	0.8%
Offal as % of Live Weight	5.6%	3.9%	3.3%	2.3%	1.9%
WOG Yield from Live Weight	17.8%	14.8%	12.3%	11.1%	9.8%
Yield of Deboned meat from WOG Weight					
Breast Fillets	21.1%	20.7%	22.7%	22.9%	25.2%
Tenders	4.4%	5.1%	5.3%	5.1%	5.2%
Thighs	19.6%	18.9%	18.9%	18.0%	17.9%
Total Deboned Yield	45.1%	44.8%	46.9%	46.1%	48.3%

$1.50 per pound.

As with the cut-up process, safety and training are important considerations in deboning.

Blending and Cooking

Many further processors purchase WOGs, parts and boneless meat for blending and/or cooking. A further processing facility may produce numerous items such as chicken patties, chicken nuggets or chicken tenders, or cooked or raw breasts, drums or wings—all packaged in various sizes, weights and package sizes for retail, foodservice or institutional sales.

These further processors may add ingredients such as injections, marinades, batters and breading. The further processor may sell their products in the ready-to-cook or ready-to-eat state, however the product is generally frozen. Most of these products are sold in 10 to 20 pound institutional packages but are also sold to the retail market in 1 to 5 pound bags or boxes, such as a 5 pound bag of frozen fully cooked or uncooked chicken tenders.

Through injection, marinating, breading and cooking, further processors add weight and value to the product. These further processors buy chicken at market prices and add value through the various processes they utilize. Such added value increases overall profit margins for the further processor.

A first processor is able to reduce the impact of feed cost fluctuations by further processing its production. Further processing reduces the significance of feed costs compared to the final selling price of the end product. Additionally, cooking and blending offers the first processor the opportunity via further processing to develop products, recipes and customers which utilize the back half of the chicken, a part that is often difficult to sell profitably.

The drawbacks to this concept of further processing are the barriers to entry. Buying or building a separate further processing facility, developing formulas/recipes, developing HACCP protocols, purchasing the blending, cooking and freezing equipment, and developing a customer base for these products is a difficult, long and expensive process.

Cooking starts with formulas, recipes, appearance, taste, texture and nutrition. In order to successfully further process through the cooking state to the ready-to-eat product, a processor must have formulas, recipes and processes that produce a product people want to eat.

Based on the ingredients, the formulation and the nutritional information, the processor must have a USDA approved label for the product. The USDA has strict guidelines for the wording which appears on a product label. For example, if a product contains more than 30% breading it must be described as a “fritter”. Also for example, a label cannot say “no hormones” or “hormone free” because no products are allowed to contain hormones.

Further processing may include grinding, blending, battering, breading, marinating and injecting prior to the cooking process. The cooking process could include par-frying, frying, baking, broiling or smoking.

Further processors that are cooking product for mass consumption are usually running the product down large production lines on conveyor belts through large fryers, ovens or broilers. From the cooking process the product moves directly into large spiral freezers and then passes into the final packaging area, and, finally, to the warehouse.

The key metric in the cooking process is once again throughput. The more pounds or pieces processed by a line in an hour, the lower the processing costs per pound or per piece. Cook lines are able to run as much as 10,000 pounds per hour. Higher production levels can be achieved by using specialty equipment.

It is important for cook lines to be balanced. If the cooking equipment is able to cook 10,000 pounds per hour, it is of little value if the processor only has the equipment to batch 5,000 pounds per hour or a freezer that is only able to freeze 7,000 pounds per hour. Having balanced production lines is the first step in maximizing productivity,

Eliminating downtime is important to maximizing productivity. It is not uncommon to see a processing facility with as much as 20% downtime on some production lines, if effective preventive maintenance programs are not in place.

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In cook plants, the downtime may also be impacted by the USDA. Like the first processor lines, cook plants are limited to running two shifts per day and then performing a complete clean-up on a third shift. The clean-up process is extensive with production line tear down and total wash down, followed by bacterial testing daily. A misstep in this process could result in a total shutdown or in a delayed start-up.

Cooked products that are considered ready to eat must be cooked to an internal temperature of 155 degrees Fahrenheit. The USDA monitors cook temperature and if products are not meeting that standard, the product must be run back down the line, often resulting in the need to sell the product as second quality at a lower price. If the problem is persistent, the USDA will close the line until management addresses the production issue.

To increase uptime, production lines need long production runs as changeover from one product to another may take one to two hours depending on the clean-up required by the USDA. If a product contains a known allergen such as eggs or peanut oil and the next product does not contain that same ingredient, the clean-up process is more extensive. These factors are an important component of SKU management.

Processors that produce cooked product also monitor cook yields, comparing finished product weight to raw weight. Overcooking and poor product handling equipment reduces cook yields. Also the cooking process may increase the risk of producing a second quality product, such as portions with breading voids or with dark spots due to overcooking. Achieving the required product quality must be measured, and produces a key metric for the cooking process.

As with any manufacturing process, labor costs are an important factor to monitor and control. In addition, overall plant costs and overhead and packaging costs must be monitored and controlled. All of these costs should be measured in terms of cents per pound, and controlled accordingly, as most of the product is sold on a per pound basis.

Inventory management of both raw materials and finished goods is important in this final stage of further processing. Chicken held below zero degrees does not have a designated shelf life, and, therefore, theoretically remains saleable for many years. However customers do review code dates and do not expect to see product more than a few months old. Managing inventory size and inventory rotation is important to having current dated product. Maintaining inventory at zero degrees can add as much as 5 cents per pound to the cost, and even more if stored in a third party facility.

Raw materials in the frozen state must be rotated and used timely as well. Frozen chicken does not have a defined ending shelf life, but freezing does change moisture content and taste over time. More importantly, if used inventory is not in the frozen state or if inventory must be thawed prior to use, a yield loss occurs as the moisture in the chicken escapes down the drain in the cooler. The longer a product sits in a cooler, the greater the weight loss. This loss of moisture could add as much as 6 cents per pound to the product cost.

An important part of inventory management is SKU management. SKUs multiply quickly in a cook plant, as it is easy to add sizes and shapes and flavor profiles to similar products. A further processor may begin manufacturing simple chicken patties, but a year later may have five different sizes of those patties and six different flavor profiles. This creates thirty SKUs, and related inventory investment, from one simple pattie product.

As mentioned earlier, bacterial issues are a potential problem, especially in cooking facilities. Certain bacteria found in finished products trigger a product recall. While the USDA does not have the authority to order a product recall, the USDA does have the authority to shut down a facility and keep it closed until the company complies with the suggestion that the product be recalled. While a small recall of a batch of product or even a day's production may cause a disruption for a company, a large recall can be devastating.

Even if a further processor carries expensive product recall insurance, the insurance company will generally not settle that claim for many months or even years. When a company announces a large recall, customers typically do two things—stop buying product, and stop paying for product already delivered. The immediate impact on a further processor's

cash flow is dramatic, especially for an asset based borrowing arrangement which relies on sales and receipts for line availability. Companies must guard against this problem with good process and procedures that limit the potential size of recalls.

Performance Measurements

Further processed products are generally sold on a per pound basis and cost data needs to be developed on a per pound basis for effective comparison.

Key indicators for a processor or stakeholder to monitor include the following items:

- Yields—cut-up yield, blending yield, cooking yield (ending weight divided by beginning weight)
- Throughput—pounds processed per hour
- WOG yield (WOG weight divided by live weight)
- Downtime by cause (start-up, mechanical, USDA, other)
- Labor cost per finished pound
- Overhead per finished pound
- Packaging costs per pound
- Freight cost per finished pound
- Total cost per finished pound
- Average selling price per pound
- Inventory aging—both raw material and finished goods
- Customer profitability
- Number of USDA Noncompliance Records issued

Table 4.12 on the following pages shows an example of a key indicator report that includes some of the major items to be monitored.

School Lunch Program

Many major chicken processors sell chickens and parts to the USDA and Agricultural Marketing Service (AMS) for the National School Lunch Program. The USDA donates the purchased product to school systems all over the US. Recipient schools systems then contract with a further processor to turn those chickens and parts into ready to eat products on a fee-for-service basis.

The chicken and parts are sold to the USDA on a bid basis every week. Further processors, in turn, generally bid on the products in demand by the school systems. If a first processor also has further processing capabilities, they may also bid by further processing their own chickens.

While margins for the further processors experience downward pressure via the weekly bid process, these USDA and AMS orders are generally high volume and provide excellent base business for further processing companies seeking to fill available capacity.

The school lunch program offers first processors an excellent opportunity to move into further processing.

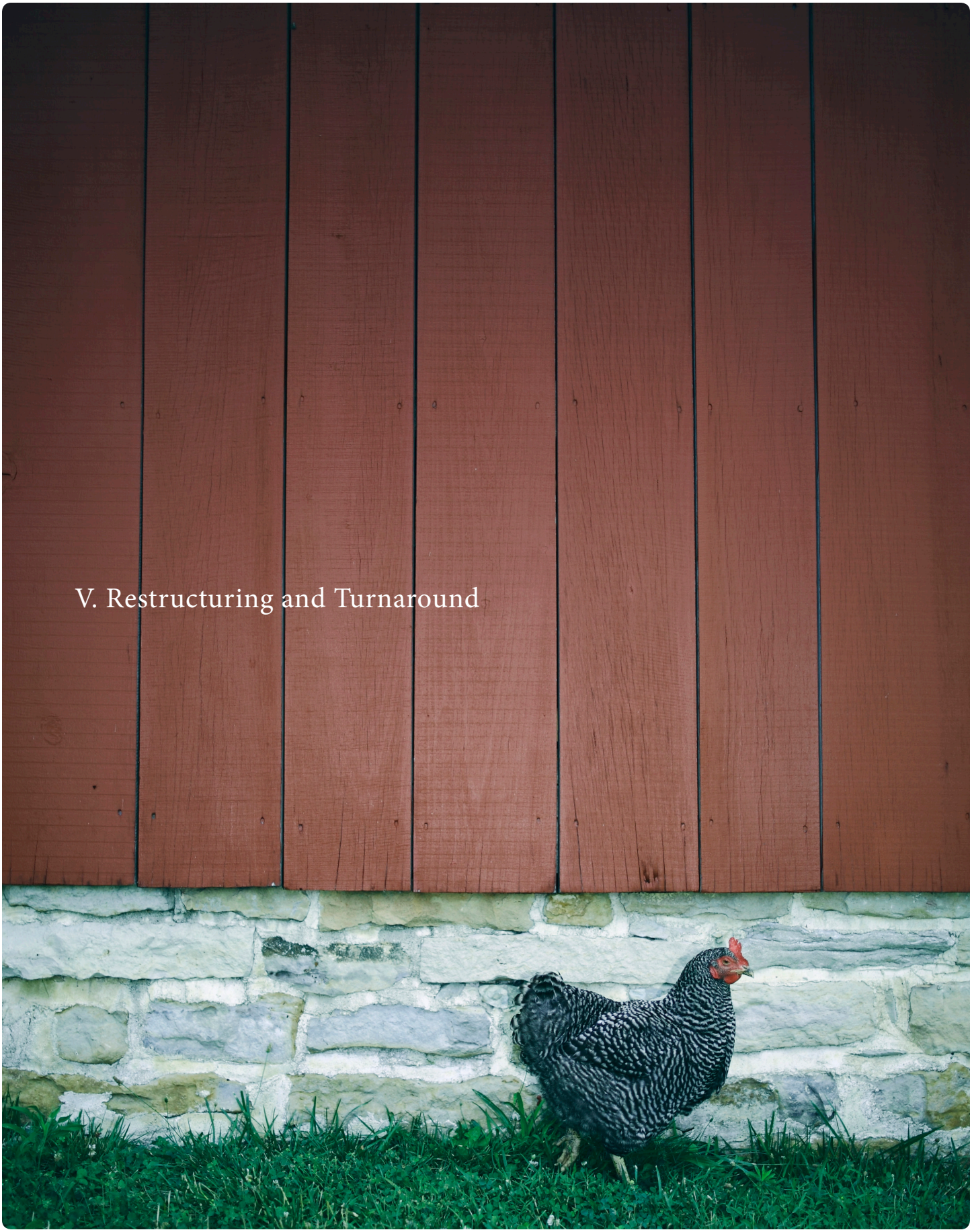
FIGURE 4.12: Further Processing Plant Key Indicator Report

Further Processing Plant Key Indicator Report		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Total/Avg
Pounds Produced (First Quality)									
	Line 1 - Broil	17,632	18,045	18,496	16,968	18,525	9,400	Closed	99,066
	Line 2 - Broil	38,025	40,400	37,884	38,960	32,832	21,104	Closed	209,205
	Line 3 - Fry	69,624	62,100	85,200	87,540	91,520	47,336	Closed	443,320
	Line 4 - Fry	85,152	84,105	83,600	82,768	88,864	41,688	Closed	466,177
	Line 5 - IQF	70,600	71,248	69,800	64,920	61,384	66,328	Closed	404,280
	Plant Total	281,033	275,898	294,980	291,156	293,125	185,856	Closed	1,622,048
Pounds Produced (Seconds)									
	Line 1 - Broil	264	235	592	424	296	244	Closed	2,056
	Line 2 - Broil	570	525	1,212	974	525	549	Closed	4,356
	Line 3 - Fry	1,044	807	2,726	2,189	1,464	1,231	Closed	9,462
	Line 4 - Fry	1,277	1,093	2,675	2,069	1,422	1,084	Closed	9,621
	Line 5 - IQF	1,059	926	2,234	1,623	982	1,725	Closed	8,548
	Plant Total	4,215	3,587	9,439	7,279	4,690	4,832	Closed	34,043
	%	*1.5%*	*1.3%*	*3.2%*	*2.5%*	*1.6%*	*2.6%*		*2.1%*
Pounds per Scheduled Hour									
	Line 1 - Broil	1,102	1,203	1,156	1,212	1,235	1,175	Closed	1,181
	Line 2 - Broil	2,535	2,525	2,706	2,435	2,052	2,638	Closed	2,482
	Line 3 - Fry	5,802	5,175	5,325	5,836	5,720	5,917	Closed	5,629
	Line 4 - Fry	5,322	5,607	5,225	5,173	5,554	5,211	Closed	5,349
	Line 5 - IQF	8,825	8,906	8,725	8,115	7,673	8,291	Closed	8,423
	Plant Average	4,717	4,683	4,627	4,554	4,447	4,646	Closed	3,844
Scheduled Hours									
	Line 1 - Broil	16	15	16	14	15	8	Closed	14
	Line 2 - Broil	15	16	14	16	16	8	Closed	14
	Line 3 - Fry	12	12	16	15	16	8	Closed	13
	Line 4 - Fry	16	15	16	16	16	8	Closed	15
	Line 5 - IQF	8	8	8	8	8	8	Closed	8
	Total	67	66	70	69	71	40	Closed	13
Downtime									
	Line 1 - Broil	3.2	1.5	3.0	2.5	1.5	2.2	Closed	2.3
	Line 2 - Broil	2.5	2.5	2.1	2.7	4.5	0.5	Closed	2.5
	Line 3 - Fry	0.5	3.6	2.5	0.5	1.1	0.3	Closed	1.4
	Line 4 - Fry	3.0	2.2	3.2	4.1	1.5	3.1	Closed	2.9
	Line 5 - IQF	1.1	0.9	1.2	2.1	3.1	1.7	Closed	1.7
	Total	10.3	10.7	12	11.9	11.7	7.8	Closed	2.1
Plant Downtime %		15.4%	16.2%	17.1%	17.2%	16.5%	19.5%	0.0%	16.8%
Yields - Finished Pounds versus Raw Weight									
	Line 1 - Broil	83%	82%	75%	78%	86%	72%	Closed	79%
	Line 2 - Broil	91%	77%	83%	79%	88%	85%	Closed	84%
	Line 3 - Fry	106%	108%	118%	112%	125%	111%	Closed	113%
	Line 4 - Fry	110%	112%	135%	129%	115%	123%	Closed	121%
	Line 5 - IQF	98%	99%	97%	95%	96%	97%	Closed	97%
	Plant Average	98%	96%	102%	99%	102%	98%	Closed	99%
Manhours									
	Line 1 - Broil	245	232	256	228	248	136	Closed	1,345
	Line 2 - Broil	218	246	236	222	252	141	Closed	1,315
	Line 3 - Fry	195	205	193	198	248	146	Closed	1,185
	Line 4 - Fry	256	262	275	228	232	148	Closed	1,401
	Line 5 - IQF	101	98	95	115	110	121	Closed	640
	Total	1,015	1,043	1,055	991	1,090	692	Closed	5,886
Pounds Per Manhour									
	Line 1 - Broil	72.0	77.8	72.3	74.4	74.7	69.1	Closed	73
	Line 2 - Broil	174.4	164.2	160.5	175.5	130.3	149.7	Closed	159
	Line 3 - Fry	357.0	302.9	441.5	442.1	369.0	324.2	Closed	373
	Line 4 - Fry	332.6	321.0	304.0	363.0	383.0	281.7	Closed	331
	Line 5 - IQF	699.0	727.0	734.7	564.5	558.0	548.2	Closed	639
	Total	276.9	264.5	279.6	293.8	268.9	268.6	Closed	262
Labor Cost Per Pound									
	Line 1 - Broil	$0.189	$0.174	$0.188	$0.182	$0.182	$0.196	Closed	$0.185
	Line 2 - Broil	$0.078	$0.083	$0.085	$0.077	$0.104	$0.091	Closed	$0.086
	Line 3 - Fry	$0.038	$0.045	$0.031	$0.031	$0.037	$0.042	Closed	$0.037
	Line 4 - Fry	$0.041	$0.042	$0.045	$0.037	$0.035	$0.048	Closed	$0.041
	Line 5 - IQF	$0.019	$0.019	$0.018	$0.024	$0.024	$0.025	Closed	$0.022
	Total	$0.049	$0.051	$0.049	$0.046	$0.050	$0.051	Closed	$0.049
Other Plant Costs Per Pound		$0.178	$0.181	$0.170	$0.172	$0.171	$0.269	Closed	$0.190
Regular Hourly Payroll		$10,729	$11,045	$11,236	$10,455	$11,445	$7,335	Closed	$62,245
Regular Hours		863	887	897	842	927	588		5,003
Overtime Hours		152	156	158	149	164	104		883
# of Employees		108	111	112	105	116	74		78
FTE's		127	130	132	124	136	87		92

Summary of Processor Considerations

1. Integrated processors need to be effective managers of their hatcheries, feed mills and grow-out operations to maximize their Feed Conversion Ratio, minimize mortality and maintain a tight range of bird weights in order to obtain high average selling prices and strong yields.
2. First processors must run their plants at capacity to minimize manufacturing costs and also absorb overhead.
3. USDA issues may slow production or create downtime that results in higher costs. First processors must have strong HACCP plans and a good working relationship with the USDA inspectors.
4. The slaughter and evisceration process is a manufacturing operation where throughput is the key factor in lowering product costs.
5. Further processing is a means by which a first processor is able to add value to the chickens they produce and a way to provide cash flow stability at times when feed costs and chicken prices have negatively diverged.
6. Throughput is the key metric in further processing facilities. Line speeds vary significantly from plant to plant and from company to company. Throughput management is an important key to profitability.

V. Restructuring and Turnaround



V. Restructuring and Turnaround

Turnaround Strategies & Restructuring Opportunities

The first step in developing a recovery plan for a poultry processor is to determine whether the cause of the performance impairment is:

- Microeconomic, which may be the result of internal management or efficiency issues which could be corrected, or a debt structure which could be renegotiated, or
- Macroeconomic, which may be the result of external overall economic factors.

An understanding of the cause of the impairment and the potential duration of its financial impact will determine whether a turnaround is attainable. If a turnaround is not possible, a restructure may be necessary. The restructure may be out of court or may require one of the court protected options. Chart 5.1 below has been designed to assist in this process.

While many first processors are currently experiencing performance issues related to feed costs (macroeconomic challenges), some first and further processors may be experiencing microeconomic financial performance problems such as operational inefficiencies or cost structure issues. In addition, the cash flow of the processor in the current feed cost environment may be insufficient to service its prevailing debt structure.

Operational Issues

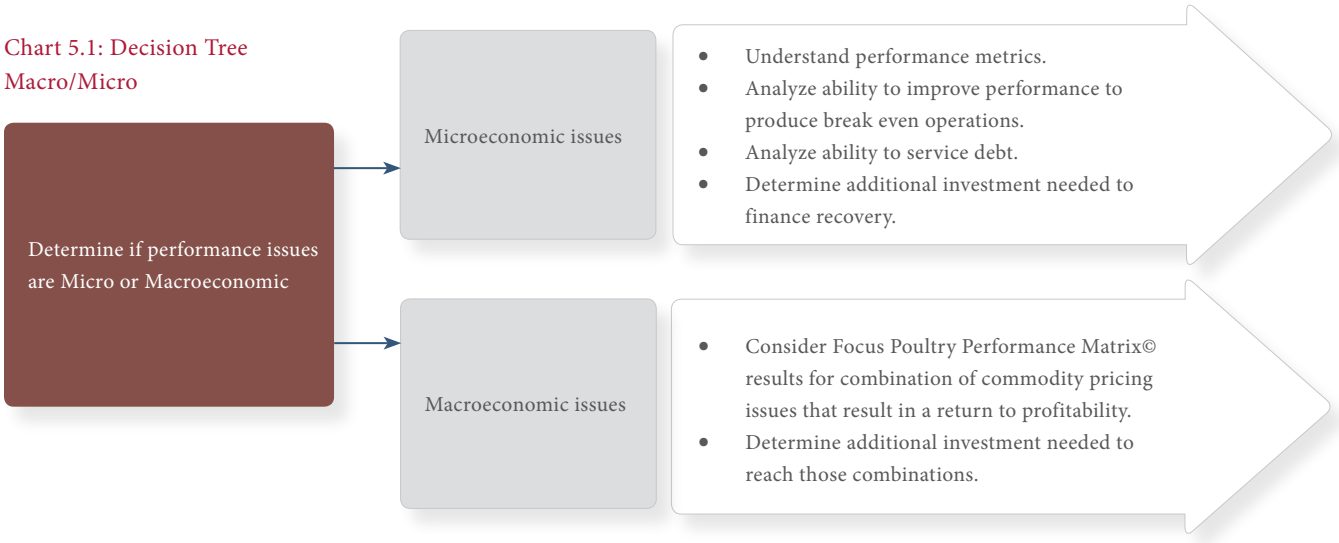
Performance of the processors must be evaluated to determine if there are additional operational issues that are being masked by the industry-wide feed cost issues.

Industry Information Available from Agri-Stats, Inc.: Many companies in the broiler industry obtain industry statistical data from the agricultural benchmarking company, Agri-Stats, Inc. ("Agri-Stats"). Companies in the poultry industry provide Agri-Stats with key operating performance data, which Agri-Stats compiles, and uses to produce a report showing how an individual company's performance ranks within the Agri-Stats universe of participating companies. While companies are not individually identified, each company is able to benchmark its own financial and operating performance against that of their competitors.

The Agri-Stats information is costly and is, therefore, one of the first costs a company may elect to eliminate when financial problems develop. However, understanding the performance of the company relative to the industry is vital to developing a turnaround plan for a poor performer.

Areas for Evaluation: When evaluating first processors, poor feed conversion ratios, high mortality and condemnation rates, and processing plant downtime are some of the factors that contribute to financial performance problems. A combination of the Agri-

Chart 5.1: Decision Tree Macro/Micro



Stats information and the weekly performance metrics described earlier in this Report will be critical to evaluating performance in these key areas. The Focus Poultry Performance Matrix© adds significant insight regarding the potential viability of the processor by clearly identifying both the microeconomic and macroeconomic movements that must occur for a processor to achieve profitability.

Some first processors do not enjoy the economies of scale necessary to profitably produce a chicken for the commodity market. In order to be successful, these processors attempt to differentiate their product through use of organics, free range designation, or further processing in order to add value to their output. The economies of scale considerations are especially important when considering alternatives available to processors using these value added strategies.

Further processing presents different performance issues than first processing. Whether the further process is a simple cut-up line or a complete freezing and cooking line, throughputs are the key performance measurement in the manufacturing process. The greater the number of first quality pounds produced, the lower the overall costs of the end product. When evaluating the performance of further processors, throughput must be measured. Expanding on throughput performance, measurements, including mechanical downtime, product change downtime, staffing, capacity for batching, cooking and freezing, and USDA inspection processes must be measured and analyzed.

To conduct a successful turn around for a processor with manufacturing performance issues, the key metrics discussed earlier in Section IV of this report and outlined again in this section must be measured and monitored through the use of key performance indicators tracked on a daily or, in some cases, an hourly basis. The performance metrics must then be benchmarked against industry or internally developed standards to identify potential problem areas.

In addition to the throughput issues discussed above, other potential problem areas may exist in the selling, purchasing, distribution and inventory management functions of the company being evaluated. These performance issues must also be identified and addressed.

Once the performance issues have been identified, a plan containing corrective actions and timetables must be developed to resolve the problem areas.

The primary steps resulting in a successful turnaround include:

1. Identify and measure key performance indicators (KPIs)
2. Evaluate KPIs to identify problem area(s)
3. Develop a plan of action to address problem areas
4. Achieve management buy-in
5. Implement plan
6. Monitor plan progress

The turnaround strategy will depend upon the depth of the problems and how quickly the issue could be corrected. The performance improvement process may require additional funding or debt restructuring by the Company's lenders during the turnaround implementation period.

Debt Restructuring Issues

In the prevailing feed cost environment, the debt structure that a processor was previously able to service may now exceed the cash flow capability of the company. As a result, lenders, after being informed of the turnaround strategy and provided with reasonable cash flow projections, and may be asked to restructure the debt. This may involve the lender providing additional availability under a line of credit, to assist in meeting feed cost requirements. Restructure may also involve interest only payment schedules or reduction in principal payment plans.

Prior to requesting a debt restructure, the processor must ensure that it has exhausted all measures to optimize its operational performance and maximize its cash flow.

Additional Requirements of a Turnaround

During a turnaround, stakeholders should demand increased visibility into performance—both operating and financial. This increased reporting should include weekly cash flow forecasts, including weekly budget-to-actual and cumulative budget-to-actual performance. Also, a thirteen week rolling cash flow should be required, and reporting of metrics should be established or ex-

panded. An example of an operating metrics report available on page 40 (Figure 4.12) of this report..

In addition to weekly cash flow reporting, timely preparation of monthly financial statements will be critical. Supplementary reporting of key indicators for the business, demonstrating progress to plan, must be required. For example, feed conversion ratio, pounds processed per hour and WOG yield would be key performance indicators to track against expected improvement. Periodic updates of the Focus Poultry Performance Matrix© would easily convey changes in the operation's microeconomic and macroeconomic position to stakeholders.

Some processors may also have non-production-related issues which require monitoring. If there have been issues with accounts receivable collections, a key indicator may be a summary of the accounts receivable aging prepared on a weekly basis. Additionally, depending upon the type of further processing in which a processor is engaged, other more targeted events may need to be monitored. A processor which stores inventory in a third party facility should be required to monitor for warehouseman's liens on its products. Weekly updates of lien waivers from the warehouse may be required.

Restructuring Considerations

During the implementation period of a turnaround or capital restructuring, the company must continue to operate efficiently while providing stakeholders maximum protection of collateral values. If those objectives—the preservation of collateral and performance improvement—are not able to be achieved, the turnaround process may become a restructuring process.

Financial restructuring of a poultry processing company, either with or without court protection, is an option available after attempts to improve operations and produce profits have failed to result in sufficient EBITDA to fund operations and/or debt service requirements. Normal operations will continue, however, all changes and outcomes will be under the increased scrutiny of the stakeholders and, possibly, the bankruptcy court.

Restructuring may include receiverships or bankruptcy, as well as out of court restructurings. Under any of those scenarios certain key areas must be addressed. The items listed below are critical issues that must be addressed when developing a restructure plan. The failure to develop a detailed restructuring plan will likely result in unnecessary loss of asset value and reduced recovery to stakeholders. A comprehensive restructuring plan must address these areas:

Critical Employee Retention: Dealing with live poultry requires uninterrupted attention and manpower. To reduce the possibility of lost value, the birds must be fed, watered and moved efficiently through a production chain to ultimate processing.

Important Vendors: Relations must be maintained with feed suppliers, utilities, veterinary services, trucking, etc. If these vendors have large outstanding balances, special terms/payments may be needed for continued service. Alternative vendors should be sourced for these critical supplies.

Location of Inventory, Machinery, Sensitive Documents, etc.: With any large agricultural or livestock operation, vehicles and other equipment may be scattered across multiple sites or in unknown locations. These items should be located before the release of any employees holding critical knowledge.

Security: Resources may need to be in place to protect assets from creditors, or others, who may act to attempt to recover operating assets of the enterprise.

Analysis of Contracts: To assist in determining restructuring strategies, it will be necessary to gather all contracts and review them from the perspective of need after restructuring. Particular emphasis should be placed on:

- Contracts between growers and processors which must be analyzed to determine responsibility for feed, utilities, trucking to processing plants, etc. Also, housing condition and bird size requirements must be understood.
- The impact of the Packers and Stockyards Act must be analyzed as it pertains to the distressed company.
- Contracts with buyers regarding commitments by the com-

pany to provide certain volumes or types of product must be reviewed, and the specifics of all purchase order agreements must be understood.

- Contracts for trucking services. Depending on the size of the processor, there may be in-house trucking operations or out-sourced trucking operations. All contracts and associated liabilities must be understood.
- Feed hedging contracts. A variety of hedging strategies may exist, ranging from locking in a portion of the overall performance via input and output hedging matches, to attempting to out-guess the market.
- Any warehouse contracts must be gathered and potential lien rights understood.

During a restructuring, as with a turnaround, the stakeholders would require increased visibility into performance—both operating and financial. This increased reporting should include weekly cash flow forecasts, including weekly budget-to-actual and cumulative budget-to-actual performance. Also a thirteen week rolling cash flow should be required, and reporting of metrics should be established or expanded. An example of an operating metrics report is available on page 40 (Figure 4.12) of this report.

In addition to weekly cash flow reporting, timely preparation of monthly financial statements will be critical. Supplementary reporting of key indicators for the business, demonstrating progress to plan, must be required. For example, feed conversion ratio, pounds processed per hour and WOG yield would be key performance indicators to track against expected improvement. Periodic updates of the Focus Poultry Performance Matrix© would also serve to easily convey to stakeholders changes in the operation's microeconomic and macroeconomic position.

Some processors may have non-production-related issues which require monitoring. If there have been issues with accounts receivable collections, a key indicator may be a summary of the accounts receivable aging prepared on a weekly basis. Additionally, depending upon the type of further processing in which a processor is engaged, other more targeted events may need to be monitored. A processor which stores inventory in a third party facility should be required to monitor for warehouseman's liens on its products. Weekly updates of lien waivers from the warehouse may be required.

When undergoing a restructure or turnaround, the processor may be required to make difficult personnel and operating decisions. It may be necessary for the company to contract and right-size its cost structure in order to reduce or eliminate deficit cash flow. If the financial restructuring includes the closure of a facility, the stakeholders should be aware that a wind-down must occur in an orderly manner. A processor with millions of birds in the field must continue to feed those birds and process them through the plant as efficiently as possible. The orderly wind-down reduces or eliminates major risks of issues with diverse entities ranging from the EPA to People for the Ethical Treatment of Animals (PETA). It also enables the operation to maximize the value of the remaining birds in inventory.

During an orderly wind down, a stepped shut down may occur. For example, no additional hatchlings would be placed in the field. Therefore, as birds grow to the required size, chicken house operations would be phased out. In most cases, any further processing would continue to occur as this provides the ability to freeze the finished product, which simplifies the liquidation process. However, if the processor's further processing operation is an unsuccessful one, it may be necessary to close the further processing facility and sell WOGs into the commodity market. The company and its consultants will need to analyze profitability under both scenarios.

Out of Court Restructuring Efforts

Direct Lender Negotiations: Initially a poultry processor and its counsel may pursue direct lender negotiations in an attempt to modify or reduce debt service requirements or access additional operating capital. Insight provided by the Focus Poultry Performance Matrix© together with an understanding of the processor's leverage position provides both the processor and its lender with the background data needed to undertake these types of negotiations from a position of knowledge. The output provided by the Focus Poultry Performance Matrix© easily allows management and stakeholders to understand the magnitude of the changes

needed for the processor to return to both a position of positive EBITDA and a position of sufficient cash flow to service debt. Before either party engages in serious negotiations, the likelihood of the processor's viability under a variety of market conditions must be fully understood.

CRO: A poultry processor may offer to appoint a CRO in exchange for a restructuring of the debt. This could result in an interest-only period of time, or the creation of "hope notes" for a portion of the principal debt owed. This alternative may be a way for a processor to continue to operate their plant, albeit with oversight from the CRO. The CRO approach may also work best when the processor and the lender believe there is a successful underlying operation to be saved.

Court-Protected Restructuring Structures

Bankruptcy Reorganization (Chapter 11): A reorganization would provide relief from current unsecured debt and could allow a forced interest-only or no-interest period (depending on the specific relationship between collateral and loan balance). If the processor believes it is able to survive from a cash flow perspective by paying current expenses with current income, though without paying past due payables or bank debt, this may be an option to consider. The processor would then have the ability to exit bankruptcy once chicken, further processing and feed prices are better aligned.

Bankruptcy Protection (Chapter 7) and Receiverships: In some cases, the processor and its advisors may determine it is better to walk away from the operation. This may involve the appointment of a receiver or a bankruptcy trustee. In either case, management responsibilities would transfer to a third party who would then need to orchestrate an orderly liquidation or 363 sale of the assets.

As described in this section, there are a variety of potential restructuring strategies with a wide range of outcomes. Clearly the extent of the information that must be considered and analyzed is substantial. From the standpoint of both the processor and its stakeholders, it is best to be as knowledgeable as possible about the processor's current financial situation and to seek legal guidance as to alternative courses of action. If it is determined that court protected restructuring should be initiated, stakeholders will likely implement one of the following:

- Appointment of a Receiver
- Chapter 7 Liquidation
- Chapter 11 Reorganization

Because the "inventory" being addressed must be fed and processed into a final product, additional considerations must be in place before any court actions are initiated. Further, as the size of the operation increases, so does complexity of decision-making. The following will address additional nuances required for assessment of each restructuring option noted above.

Chapter 11 Reorganization

A Chapter 11 Reorganization should pose less operational disruption than either the appointment of a Receiver or a Chapter 7 Liquidation as existing management would likely remain in place. Assurances must still be made to have sufficient cash on hand to feed the birds and to compensate employees. Assurances must also be made to the lender that the collateral will be maintained and assets will be used to maximize recovery. It will be important for the processor to continue to receive 100% of sales proceeds directly from its buyers. Sales proceeds going to the lender for later disbursement to the processor could present unnecessary operational challenges if not handled appropriately to address the needs of the birds. At the same time, the lender must have confidence funds will be used appropriately to maximize recovery.

Chapter 11 reorganization requires coordination and cooperation between the processor, the lender and the trustee. Additional reporting requirements—both financial and operating—should be expected.

Court-Appointed Receivership

The appointment of a Receiver is either consensual and timely, or nonconsensual and unpredictable. The appointment process also varies by state, with some Courts deferring to lender recommendations regarding who should be appointed as Receiver, while other Courts may appoint from a predetermined and approved list of individuals. Because there cannot be any lapse in care for the birds, the Receiver must have the ability to be on site

immediately upon appointment to maintain order, secure the assets and to reassure the employees caring for the birds.

Predetermined arrangements must be made for the Receiver to have immediate access to cash should he/she need to purchase feed or make payments to critical vendors. The Receiver should have a pre-funded account containing at least fourteen days of operating cash to address such needs. These funds should be independent of the processor's normal operating account to avoid the common (or unexpected) delays that may occur when assets are transferred to a Receiver.

The stakeholders and the Receiver must have agreed-upon decision points based on time, account balances or available resources. As an example, if the processor's operating account drops below the sum of fourteen days of feed cost plus thirty days of labor, the orderly wind down must commence or additional funding must be received. This would be necessary so that all birds can be properly fed until processing.

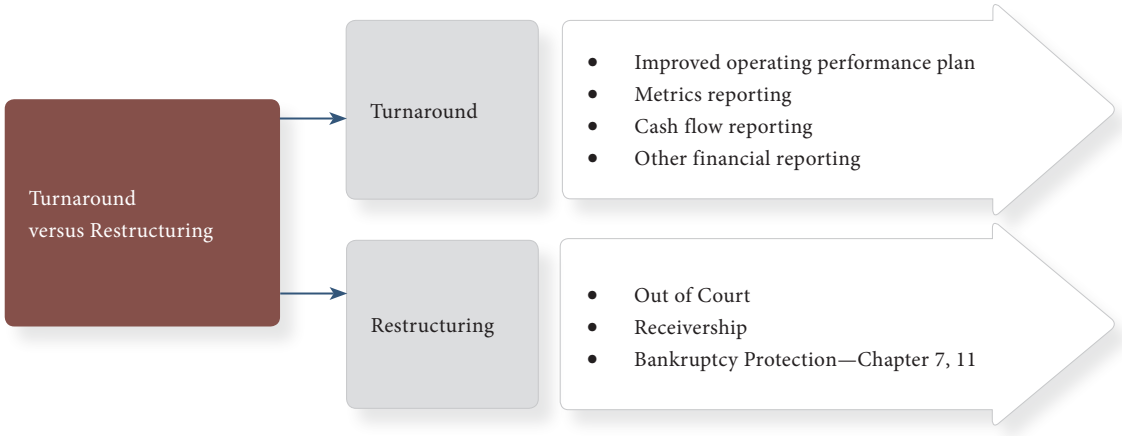
Chapter 7 Liquidation

Upon the filing for Chapter 7 liquidation, a Trustee will be appointed to manage the assets of the processor and ensure the health of the birds through the processing cycle. No additional hatchlings would be placed in the field. Similar to the preparation required for the appointment of a Receiver, lenders must be prepared to finance any shortfalls of the estate to ensure that the collateral will survive until it is processed. As stated, a detailed liquidation plan must be developed in order to prevent unnecessary loss of value and reduced recovery.

Turnaround versus Restructure

Processors may experience financial difficulties due to either microeconomic or macroeconomic issues. Microeconomic difficulties often develop due to the internal cost structure of the company not being aligned with the prices the company is able to obtain for its products. These issues could be management related, equipment related, or due to the company's capital structure. These problems must be solved by the company through management changes, equipment purchases, performance improvement, or capital restructuring. In all cases a detailed turnaround plan will need to be developed, and may include the sale of all or part of the company.

Macroeconomic issues often result in the poultry industry when the cost of raw materials (generally feed) is not in alignment with the price received for the products. Many processors are struggling with margin compression resulting from increased prices for corn and soybean meal. An analysis must be done to determine if turnaround opportunities exist or if a broader restructure, up to and including liquidation, will be required.



VI. Conclusion

The successful turnaround or restructure of a poultry processor begins with a determination of the cause of the financial problems being experienced. Operating performance must be evaluated, and prevailing debt structure assessed. Then, the impact of the macroeconomic environment must be considered.

The extent to which the performance problems are a result of the operations of the business versus the impact of feed costs will impact the turnaround or restructuring opportunities available to the processor. Determination of the underlying problem is achieved through a review of the processor's key performance indicators, and a subsequent comparison of these indicators to benchmarks of others in the industry. The severity of the problem is readily observed through the use of the Focus Poultry Performance Matrix©, which identifies the micro/macroeconomic combinations required for a processor to achieve viability.

With this information, stakeholders may then determine an appropriate plan of action. This plan will need to address the unique aspects and risks associated with dealing with a live inventory component, the birds, and with a food inventory component, the meat.

VII. About Focus

VII. About Focus

Company Background

Focus Management Group provides turn-key support to under-performing companies and their stakeholders. We are a leader in the market for poultry companies facing turnaround situations. Our performance has earned us the highest levels of trust and respect when confronted with challenging circumstances.

Overview

Nationwide Presence: Offices in Chicago, Cleveland, Los Angeles, and Tampa.

Industry Expertise: Specific expertise providing financial and operational guidance to clients with poultry operations.

Seasoned Professionals: Proven team of 50 multi-disciplined professionals with an average of 25+ years of experience in Operations, Finance, Agriculture and Real Estate.

Proven Experience: Broad engagements covering 500+ industries.

Process

Process Driven Approach: Quickly assess a company's situation and offer clear recommendations on the best course of action.

Rapid Response: Deploy professionals with industry expertise to rapidly assess issues and devise solutions with associated timelines and cost-benefit analysis.

Collaborative & Analytical Approach: Undertake diagnostic measures to quantify and pinpoint areas of concern and work with client management teams to implement changes.

Lender & Creditor Services

- Business Viability Assessments
  - Debtor Oversight
  - Cash Flow Performance
  - Troubled Credit Alternatives
- Court-Appointed Services
  - Financial Advisor
  - Receivership
  - Expert Witness Testimony
- Asset Recovery
  - Loan Recovery
  - Asset Sales
  - Liquidation
- Due Diligence & Underwriting
- Computer Forensics & eDis-

Company Services

- Restructuring Management
  - Turnaround Management
  - Financial Restructuring
  - Business Plan Execution
  - Asset Divestiture
  - Bank Negotiations
- Cash Flow Management
  - Cash Flow Forecasting
  - Debt Refinance
- Operations Improvement
  - Pre-Bankruptcy Planning
  - Financial Advisor to Debtor
  - Assignee for the Benefit of Creditors
  - 363 Business Sale
  - Business Wind Down
- Interim Management
- Mergers & Acquisitions

Equity Sponsor Services

- Performance Improvement
  - Asset Reliability
  - Operations Improvement
  - Interim Management
- Restructuring Support
  - Turnaround Management
  - Operational Restructuring
  - Bank Negotiation
- Due Diligence Services
  - New Opportunities
  - Capital Calls
- Merger Integration Management

VII. About Focus

About the Authors

Robert Miles is a seasoned financial executive with over 30 years of experience in corporate financial management. In a prior role, Robert served as the Chief Financial Officer of Zartic, Inc., a diversified producer of beef, poultry and pork products distributed through institutional channels to schools, restaurants and the military.

In addition to beef processing, the Company raised and slaughtered poultry for further processing and slaughtered hogs for its pork products. During his tenure, Robert led the Company through two refinances and significantly reduced costs within its largest manufacturing facility.

Juanita Schwartzkopf has 25 years of experience in commercial banking, financial management and risk management. She has served as a lender, board member and consultant to many agricultural entities ranging from agricultural crop producers to dairy cooperatives, beef producers and equipment manufacturers. She also has owned and operated a dairy, grain and beef farm in the Midwest.

In a recent engagement, Juanita managed the transition of a dairy operation into a successful beef and crop production enterprise, which significantly improved cash flow.

VIII. Glossary

Sources:

1. USDA Food Safety and Inspection Service (FSIS)
2. National Chicken Council (NCC)

VIII. Glossary of Terms Used in the Poultry Industry

3's AND UP: 3 to 4 3/4 pounds, usually with neck and giblets for retail grocery; whole, cut-up, parts, and 40 to 45 days of age. This size is typical retail size.

BASTED or SELF BASTED: Bone-in poultry products that are injected or marinated with a solution containing butter or other edible fat, broth, stock or water plus spices, flavor enhancers and other approved substances must be labeled as basted or self basted. The maximum added weight of approximately 3% solution before processing is included in the net weight on the label. Label must include a statement identifying the total quantity and common or usual name of all ingredients in the solution, e.g., "Injected with approximately 3% of a solution of _____ (list of ingredients)."

Use of the terms "basted" or "self-basted" on boneless poultry products is limited to 8% of the weight of the raw poultry before processing.

BROILER: A chicken raised for its meat, as distinguished from a "layer," which is a chicken that lays eggs for the table.

BROILER ROASTER: 5 to 6 pound hens, usually 55 days old.

BROILERS FOR DEBONING: 5 to 6 pounds, males usually 47 to 56 days of age. Deboned for nuggets, patties, strips, and similar boneless products; most often sold without neck and giblets.

CAPON: Surgically desexed male broilers weighting 7 to 9 pounds, and about 14 to 15 weeks of age. Plump and tender. Capons were once common but are now a specialty item.

CHEMICAL FREE: The term is not allowed to be used on a label.

CONDEMNATION: Birds removed from the production line by quality control or USDA inspectors for any reason.

CONTRACT GROWER: An independent farmer who is under contract to grow birds for a third party.

CORNISH GAME HENS: Less than 30 days of age and about 2 pounds live weight.

CUTS OF CHICKEN

- Backs: The back half of the chicken that consist of the drums, thighs and backs
- Breast Halves or Splits: Chicken breasts cut in half along the breast bone (white meat)
- Breast Quarter: Breast, wing and back portion (white meat)
- Cut-up Chicken (8 pcs.): Whole chicken cut into two breast halves, two thighs, two drumsticks, two wings
- Drummette: Wing portion consisting of only the meatier first section; looks like a tiny drumstick (white meat)
- Drumstick: Portion of the leg below the knee joint (dark meat)
- Fronts: The front half of the chicken that consists of the breasts and wings
- Halves or Splits: Whole chicken cut lengthwise into two pieces of approximately equal weight
- Leg Quarter: Drumstick and thigh (dark meat)
- Mid-joint Wing: Wing portion consisting of only the flat, middle section (white meat)
- Saddle: The back half of the chicken
- Tenders: Strips of boneless, skinless breast meat (white meat)
- Thigh: Portion of the leg above the knee joint (dark meat)
- Wing: Whole wing with all three sections

DEBEAK: Clipping the chick's beak to prevent injury to other birds.

ENHANCED CHICKEN PRODUCTS: Some uncooked chicken products are enhanced with chicken broth or a similar solution. The presence and amount of the broth or other solution must be stated clearly and the actual ingredients listed on the label.

Both enhanced and non-enhanced products are currently available in the marketplace. Processors who make enhanced product suggest it provides a more tender and consistent product that is more moist when cooked. Consumers may prefer these to non-enhanced products. Others will continue to prefer fresh chicken with no added ingredients.

Salt is used in some enhanced products. The overall contest of the chicken often remains very low in sodium. The presence of salt or sodium is noted on the label.

EVISCERATE: To remove the entrails from, or disembowel, the chicken.

FARM-RAISED: All chickens are raised on farms. So the label "farm-raised" can refer to any chicken. When this term is used on restaurant menus and the like, it usually refers to chickens raised on a local farm.

FASTFOOD SIZE BROILER: 2 pounds 4 ounces to 3 pounds 2 ounces, (mostly 2 pounds 6 ounces to 2 pounds 14 ounces), usually cut-up, without necks and giblets, may have tail and leaf fat removed, and less than 42

VIII. Glossary of Terms Used in the Poultry Industry

days of age.

FCR (Feed Conversion Ratio): The number of pounds of feed to produce one pound of live weight.

FIRST PROCESSOR: A processing operation which receives live meat poultry and produce a raw, dressed poultry product, either in whole or in parts.

FORMED: Chicken shaped into nuggets, hot dogs, etc.

FOWL: A low quality poultry meat. Same as a spent hen.

FRAMES (or CAGE): The primary carcass of the chicken (excluding legs and wings) and is also referred to as a "cage".

FREE RANGE (OR FREE ROAMING): Chicken may be labeled "free range" if the animals were given access to the outdoors. Generally this does not mean that the chickens have a large, grassy "range" but that they are given access to a fenced area, or pen, outside the chicken house. The size of the pen varies but is usually smaller or about the same size as the chicken house itself. Chickens will often stay close to the water and chicken feed, which is usually located within the house, so they may or may not utilize the pen.

Chickens labeled "USDA Organic" must also be raised free-range, but not all free-range chicken is "organic." Less than 1% of chickens nationwide are raised as "free range."

FRESH (or FRESH POULTRY): "Fresh" means whole poultry and cuts have never been below 26 °F (the temperature at which poultry freezes). This is consistent with consumer expectations of "fresh" poultry, i.e., not hard to the touch or frozen solid.

In 1997, FSIS began enforcing a final rule prohibiting the use of the term "fresh" on the labeling of raw poultry products whose internal temperature has ever been below 26 °F.

The temperature of individual packages of raw poultry products labeled "fresh" can vary as much as 1 °F below 26 °F within inspected establishments or 2 °F below 26 °F in commerce. Fresh poultry should always bear a "keep refrigerated" statement.

FROZEN POULTRY: Temperature of raw, frozen poultry is 0 °F or below.

FSIS: The USDA Food Safety and Inspection Service.

FURTHER PROCESSED: The upgrading of the raw state of the chicken, such as deboning, cooking, breading, nuggets, etc.

FURTHER PROCESSOR: A processing operation which uses whole carcasses or poultry products for the production of fresh or frozen products, and may include the following types of processing: cutting and deboning, cooking, seasoning, smoking, canning, grinding, chopping, dicing, forming or breading.

GEORGIA DOCK: Market quotes for a premium whole broiler compiled by the Georgia Department of Agriculture.

GROW-OUT HOUSE: Typically a 40 ft by 400 ft open span structure with adjustable curtains (for temperature control) for growing chicks.

HALAL and ZABIAH HALAL: Products prepared by federally inspected meat packing plants identified with labels bearing references to "Halal" or "Zabiah Halal" must be handled according to Islamic law and under Islamic authority.

HATCHERY: Environmentally controlled nurseries where eggs are hatched.

HEAVY HENS: Spent breeder hens that are no longer commercially productive for laying hatching eggs, usually 5 to 5 1/2 pounds, about 15 months of age, used for cooked, diced or pulled meat. Also sold at retail as "stewing hens." Because of their greater age, stewing hens have more flavor than broilers but are considerably less tender.

HEAVY YOUNG BROILER ROASTER: 6 to 8 pounds, sold fresh or frozen through retail grocery, both whole and parts; less than 10 weeks old; typical "roaster".

IQF: Individually Quick Frozen chicken parts

KOSHER: "Kosher" may be used only on the labels of meat and poultry products prepared under rabbinical supervision.

LIGHT HENS: Produce table eggs; typically not used for meat.

MECHANICALLY SEPARATED POULTRY: A paste-like and batter-like poultry product produced by forcing bones with attached edible tissue through a sieve or similar device under high pressure to separate bone from the edible tissue. Mechanically separated poultry has been used in poultry products since 1969. In 1995, a final rule on mechanically separated poultry said it would be used without restrictions. However, it must be

VIII. Glossary of Terms Used in the Poultry Industry

labeled as "mechanically separated chicken or mechanically separated turkey" (depending on the kind of poultry used) in the ingredients statement. The final rule became effective November 4, 1996. Sometimes referred to as MDM or mechanically deboned meat.

"MEAT" DERIVED BY ADVANCED MEAT/BONE SEPARATION AND MEAT RECOVERY SYSTEMS: The definition of "meat" was amended in December 1994 to include as "meat" product derived from advanced meat/bone separation machinery which is comparable in appearance, texture and composition to meat trimmings and similar meat products derived by hand.

Product produced by advanced meat recovery (AMR) machinery can be labeled using terms associated with hand-deboned product, e.g., "beef" or "pork" trimmings and ground "beef" or "pork." The AMR machinery cannot grind, crush or pulverize bones to remove edible meat tissue and bones must emerge essentially intact. The meat produced in this manner can contain no more than 150 milligrams of calcium per 100 grams product. Product that exceeds the calcium content limit must be labeled "mechanically separated beef or pork."

MORTALITY RATE: % of birds that die on the farm or die between the farm and the slaughter line.

NATURAL: Under USDA regulations, a "natural" product has no artificial ingredients, coloring ingredients, or chemical preservatives, and is minimally processed, just enough to get it ready to be cooked. The label must include a statement explaining the meaning of the term natural (such as "no artificial ingredients; minimally processed"). Most ready-to-cook chicken can be labeled "natural," if processors choose to do so.

NEW YORK DRESSED: A whole broiler with head, feet and entrails intact.

NO ANTIBIOTICS (red meat and poultry): The terms "no antibiotics added" may be used on labels for meat or poultry products if sufficient documentation is provided by the producer to the Agency demonstrating that the animals were raised without antibiotics. Sometimes referred to as ABF chicken.

NO HORMONES (pork or poultry): Hormones are not allowed in raising hogs or poultry. Therefore, the claim "no hormones added" cannot be used on the labels of pork or poultry unless it is followed by a statement that says "Federal regulations prohibit the use of hormones."

OFFAL: Waste from the processing plants. Feathers, guts, blood, etc.

OFFAL PLANT: Where offal is separated and loaded for shipment to a protein of by-product facility.

ORGANIC: Raising chickens organically is a production concept. The USDA defines organic production and prohibits the use of the term "organic" on packaging of any food product not produced in accordance with its rule.

The organic rule prohibits the use of antibiotics in animal production and requires the use of feed made from organic ingredients, so that no pesticides or chemical fertilizers are used on the corn and soybeans used to make poultry feed, among many other requirements.

According to USDA, the organic food label does not indicate that the product's safety, quality or nutritional attributes are any higher than conventionally produced product.

ORGANIC LABELING: Look for the USDA organic seal on raw, fresh products and processed products that contain organic agricultural ingredients. Or it may appear on a sign above an organic produce display.

On multi-ingredient products, the seal is usually placed on the front of the package (principal display panel); however, it may be placed anywhere on the package. The label categories are as follows:

- 100% Organic: Use of the USDA Organic Seal is optional
- Organic: 95% or more organic ingredients. Use of the USDA Organic Seal is optional
- Made with Organic Ingredients: At least 70% organic Ingredients
- Less than 70% Organic Ingredients: Organic ingredients denoted in ingredient list only

OVEN PREPARED: Product is fully cooked and ready to eat.

PASA: Packers and stockyards Act.

POULTRY: Domesticated fowl raised for meat and/or eggs.

POUSSIN: Less than 24 days of age and about 1 pound or less.

PRODUCED WITHOUT HORMONES: Despite what you may hear, no artificial or added hormones are used in the production of any poultry in the United States. Regulations of the Food & Drug Administration prohibit the use of such hormones. Any package of chicken labeled "produced without hormones" should also have a statement that no added hormones are used in the production of any poultry.

PULLET: Young female breeder chicken that produces fertile hatching eggs, which become broilers for the market.

VIII. Glossary of Terms Used in the Poultry Industry

RAISED WITHOUT ANTIBIOTICS (or "ANTIBIOTIC-FREE"): "Raised without Antibiotics" on a package of chicken indicates that the flock was raised without the use of products classified as antibiotics for animal health maintenance, disease prevention or treatment of disease. Animal health products not classified as antibiotics (such as some coccidiostats, which control protozoal parasites) may still be used.

"Antibiotic free" is not allowed to be used on a label but may be found in marketing materials not regulated by the U.S. Department of Agriculture. It means the same thing as "Raised without Antibiotics." All chicken is "antibiotic-free" in the sense that no antibiotic residues are present in the meat due to the withdrawal periods and other precautions required by the government and observed by the chicken companies.

RETAINED WATER: A "retained water" statement, such as "May contain up to 6% retained water" or "Less than 4% retained water," is found on most packages of fresh poultry. This statement indicates the amount of water retained in the product as a result of essential food safety procedures, such as chilling processed chickens in ice-cold water to reduce their temperature and retard the growth of spoilage bacteria and other microorganisms. Single-ingredient chicken is not allowed to retain any water beyond the minimum required by these essential food safety procedures.

ROASTER: 5 to 8 pounds, less than 10 weeks of age; usually 55 to 60 days of age.

RTC: Ready to Cook, refers to products that require some cooking post production (may contain bacteria).

RTE: Ready to Eat, refers to products that do not require further cooking to eat (bacteria free)

SPIKE: Adding roosters to a breeder flock during the laying cycle in order to increase hatchability.

SPURS: The extra "toe" on the insie of a bird's leg. These are normally removed on the rooster to protect the hens.

USDA: The United States Department of Agriculture.

WOG: A whole, dressed broiler without giblets

Contact Information

Focus Management Group is a leading business restructuring firm headquartered in Tampa, with offices in Chicago, Cleveland, and Los Angeles. For more information regarding our experience in the poultry industry, contact one of our experienced Professionals listed below:

Corporate Offices
5001 W. Lemon Street
Tampa, FL 33609
Tel: (800) 528-8985
Fax: (813) 281-0063
www.focusmg.com

Key Contacts
Robert Miles: r.miles@focusmg.com
Juanita Schwartzkopf: j.schwartzkopf@focusmg.com