

Expert Response to GIPSA Poultry Contracting Proposed Rules

Dr. Thomas Elam, FarmEcon LLC, March 21, 2017

Summary: USDA's Grain Inspection, Packers and Stockyards Administration (GIPSA) has revised their 2010 proposed rulemakingⁱ pertaining to contract grower arrangements, and re-submitted for public comment^{ii iii iv}. While the revised rules are substantially simplified and different from the 2010 version, they still fall far short in several areas. In general, GIPSA has:

- Ignored key information contained in a heavily cited USDA study that would partially contradict their assertions that the proposed rules are required to balance the bargaining power of contract growers.
- Alleged a lack of local competition for grower services as a structural problem in grower pay rates, but not proposed rules that would address the alleged issue.
- Not fully accounted for the potential impact of the proposed rules on long term productivity gains in chicken production.
- Relied on unsubstantiated grower complaints and grower-supplied data without verification from GIPSA investigation or third party sources.
- Made other allegations that are not well-defined and supported by third party sources.
- Proposed extensive changes in grower ranking systems without demonstrating that the new system is required, or would be effective in addressing issues raised.
- Calculated proposed rule costs relying on assumptions that are not based on real world costs, but rather national averages and assumed man-hours.

Contrary to GIPSA assertions, the proposed rules could reduce innovation rates, open the door for potential additional litigation, add costs, and likely have little impact on overall grower pay.

Market Structure and Competition for Grower Services

GIPSA states as a rationale for the proposed rules that integrators have “market power to force prices for poultry growing service below competitive levels.” One mechanism for this alleged market power is stated as a lack of competition for growers in areas where there is only one integrator that contracts for live chicken grower services.

GIPSA presents no evidence to demonstrate that there is a widespread issue of returns below an undefined “competitive level” in their proposal. Assuming GIPSA is correct, integrators would have difficulty recruiting new growers. Existing growers would be leaving due to financial distress. No evidence is presented to support this allegation, nor do the proposed rules address alleged market power arising from lack of grower ability to switch integrators.

A 2014 USDA study^v (the MacDonald study) cited heavily by GIPSA states that paying growers below market rates would make it difficult to attract growers for both new capacity and to replace retiring growers. Evidence from the long history of live broiler production growth (see figure 4 below), most of which is contracted to independent growers, strongly suggests that growers do receive a competitive rate of return sufficiently high to encourage investment.

The USDA MacDonald study further states “The need to attract new growers may limit integrators’ ability to exercise market power over other growers. One way to exercise that market power would be to reduce the payments made to growers. But if that reduction keeps new growers away, and if foregoing new growers means operating processing plants at less than full capacity, then reducing contract fees may not prove profitable for integrators.” (page 30)

The USDA study cited above relied upon a grower survey. Growers responding to a USDA survey may have had an incentive to overstate their dependence on a single integrator, and understate their ability switch dealers. No independent third party evidence is presented to validate the survey responses. Logically inconsistent, 7% of the farms self-reported that they had only one integrator in their area, and also reported they could switch to another integrator.

As shown in table 1 below, assuming the study data does represent the percentage of growers with only one integrator alternative, almost 80% have more than one integrator in their area (page 30).

Table 1

Broiler production, by number of integrators				
Integrators in Grower’s Area	Farms	Birds	Production	Can change to another integrator
Number		<i>Percent of total</i>		<i>Percent of farms</i>
1	21.7	23.4	24.5	7
2	30.2	31.9	31.7	52
3	20.4	20.4	19.7	62
4	16.1	14.9	14.8	77
>4	7.8	6.7	6.6	71
Refused	3.8	2.7	2.7	na
	100.0	100.0	100.0	

GIPSA fails to acknowledge that if there are at least two integrators a significant portion of farms have the option to change integrators. Even if a particular grower cannot switch integrators, this high level of potential switching among all growers represents a very real competitive threat to integrators if growers are not satisfied with their current arrangements. A total of 7,626 of the 15,345 farmers, or 50%, responding to this question indicated that they could switch to another integrator.

Other evidence presented in the MacDonald study (page 32) suggests that growers with only a single integrator in their area benefit from longer contracts. As shown in the next table, across “years producing broilers”, the average grower contract length with only one integrator in their area is consistently higher than the contract length for two or more integrators.

For relatively new growers with 0-5 years in the business the average contract is 84 months for one integrator compared to only 29 for more than 3 integrators. If there was abuse of market power on the part of the integrator we would expect to see the opposite contract length pattern. Geographically isolated integrators would need to grant only relatively short contracts, and use

frequent renewals to threaten termination. Integrators with nearby competition could want longer contracts to tie up production, and prevent growers from switching.

This evidence is clearly not consistent with integrator abuse of market power. Apparently, integrators in isolated locations feel compelled to give their growers longer contracts, and growers want longer contracts than is the case where there are more alternatives. Growers faced with alternatives get shorter contracts that offer the opportunity to switch integrators more often.

Also, geographically isolated integrators have no short-term options if they lose a grower. Any growers lost to termination or retirement would be replaced by a new grower, a process that can take months. In the meantime, the production from the lost grower is lost to the integrator. There is a stronger incentive to maintain existing growers when there are no other growers that can be enticed to switch than is the case where there are other integrators in the area.

Table 2

Contract length, by number of integrators and years producing broilers				
Years producing broilers (operation)				
Number of integrators	0-5	6-10	11-19	>19
<i>Mean contract duration (months)</i>				
1	84	52	47	40
2	51	36	39	26
3	44	30	29	26
>3	29	33	21	11
<i>Contract is less than 12 months (Percent of farms)</i>				
1	27	36	54	64
2	59	64	61	71
3	50	70	66	70
>3	62	63	78	89
<i>Contract exceeds 59 months (Percent of farms)</i>				
1	63	48	42	26
2	36	24	25	12
3	28	22	17	18
>3	13	19	12	4

Source: USDA Agricultural Resource Management Survey, 2011, version 4. Contract growers only.

The GIPSA ranking proposal ⁱⁱ cites a 2006 statistic in the MacDonald study showing growers with only 1 integrator in their area received 8 percent less per pound than growers with 4 or more local integrators and 4 percent less than those with 2 or 3 integrators (page 30). Table 2 provides a partial explanation for the difference. The growers with only one integrator in their local area

receive substantially longer contracts compared to growers in all other areas. Growers with 2 or 3 integrators generally get longer term contracts than those with more than 3.

Finally, the proposed rules do not address the geographic structure of live chicken production. No remedy is presented for increasing the number of integrators potentially competing for growers in a local area.

Broiler Grower Income

The 2014 MacDonald study also showed 2011 broiler grower household income exceeded all household mean and median income, and was about the same as all farms. (page 42) There were significant differences in broiler grower household income based on the number of broiler houses operated. Growers with 5 or more broiler houses had household incomes that greatly exceeded all farms and all households. (table 3)

Table 3

Household income comparisons, 2011				
Household category	Annual 2011 Household Income (\$)			
	Mean	Median	20th Percentile	80th Percentile
All U.S. households	72,812	50,504	20,262	101,582
All U.S. farm households	87,288	57,050	24,201	114,417
All contract growers	86,883	68,445	18,782	143,294
By number of houses				
1-2 houses	61,174	45,199	7,865	106,706
3-4 houses	77,998	65,050	18,782	127,187
5-6 houses	98,392	85,159	27,069	158,326
7 or more houses	157,343	119,363	42,302	269,112

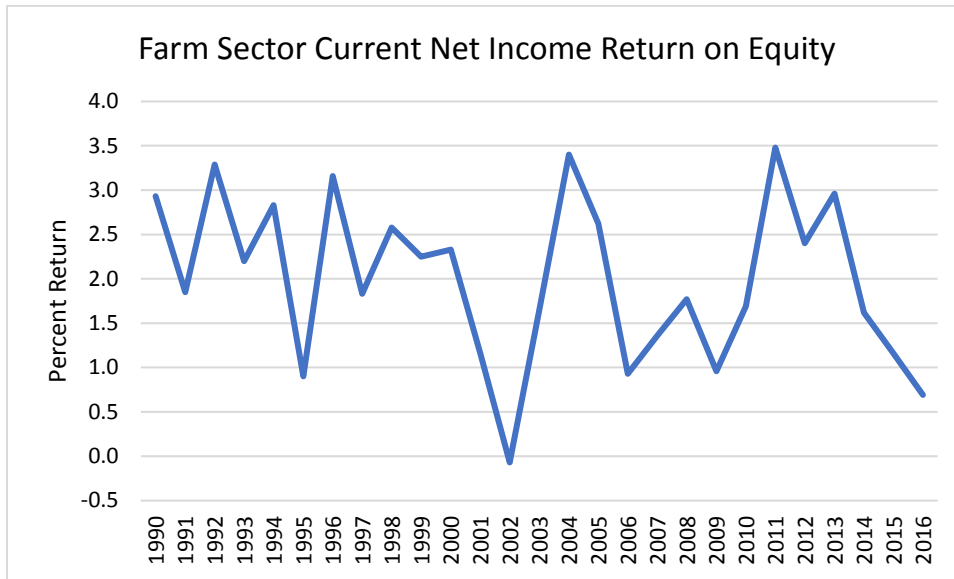
Sources: USDA Agricultural Resource Management Survey, 2011, version 4, and U.S. Census Bureau, Current Population Reports P-60, *Income Poverty and Health Insurance Coverage in the United States: 2011*.

To the extent that broiler grower household income is less than national averages for farms and all households it appears to be attributable to scale of operation and lack of additional farm and non-farm income sources. Growers with one or two houses had 20th percentile household incomes that were substantially less than national averages. However, even these small broiler operations had 80th percentile incomes that were greater than the national average, and almost as large as all farms. It appears that a diversified farming operation with 1-2 broilers houses and additional income sources can generate substantial household income.

Farming returns in general are meager and volatile. From 1990 to 2016 the current net income to equity ratio averaged only 2.0% ^{vi}. The maximum was 3.48% in 2012 and the minimum -0.07% in 2002. That there are some broiler growers with meager 20th percentile household incomes is to an extent the result of generally poor farm returns, not a differentiating feature of broiler production.

Volatility of broiler grower income is also a symptom of general farming returns volatility.

Figure 1



The MacDonald study breaks out 2011 broiler operations by number of houses. (page 16) Table 4 below shows this breakout. Farms with 1 or 2 broiler houses accounted for 23.7% of the total farms and 86.3% had 3 or more. Farms with 3 or more houses earned mean and median household incomes that exceeded the U.S. all household income.

Table 4

Size distribution of broiler operations, 2011				
Item	Farms	Broilers removed	Pounds removed	Capacity (sq. ft.)
All farms	15,468	7,868 million	45,921 million	1,265 million
Houses on farm	<i>Percent of total</i>			
1-2	23.7	10.2	9.5	9.6
3-4	44.3	37.3	37.6	38.2
5-6	20.3	26.8	27.0	26.8
7-8	5.9	10.5	10.6	10.8
9-10	2.1	4.7	4.8	4.7
11-12	2.3	5.7	5.6	5.6
13-30	1.0	3.9	4.1	4.3
Refused	0.4	0.9	0.9	n.a.
All	100.0	100.0	100.0	100.0

Note: Contract growers only, with 2011 removals. The row labeled "refused" covers survey respondents who did not provide a response for housing features.

Source: 2011 Agricultural Resource Management Survey, version 4.

In summary, to the extent that there is an issue with broiler grower incomes it is clearly scale of operation and the general characteristics of farm net income. The small 1 to 2 house broiler grower operations on the lower end of their farm size gross income range earn very meager

household incomes. However, at the same, larger, more diversified 1 to 2 house 80th percentile broiler grower farms earn income comparable to all U.S. households and all U.S. farm households in the 80th percentile.

In summary, it would appear that there is no general issue with broiler grower household incomes other than small size of some operations. Even within the smallest size category in the MacDonald study the top 20% farms earned competitive incomes. The GIPSA rules proposals would do nothing to increase incomes of the smallest and least profitable grower farms.

Integrator Hold-Up of Flock Placement

Hold-up is defined as an integrator refusing to place a flock based on a grower's unwillingness to make a capital improvement upgrade. If an integrator engages in this practice the broiler flock that was to go to a grower would either need to be destroyed or placed in another grower's houses. Production could be interrupted, and the integrator would lose sales and profits.

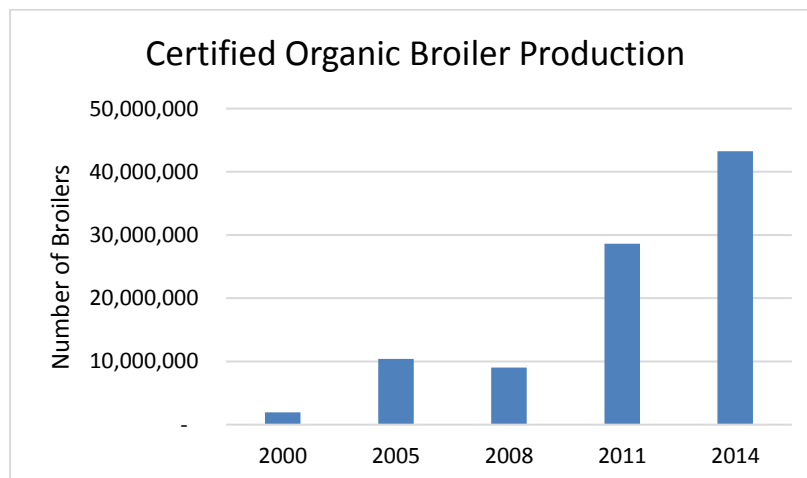
GIPSA has not supplied data on the actual prevalence of this practice, or its impact on growers. Rather, undocumented grower complaints are cited. To justify rules changes GIPSA should supply data to support the assertion that integrator hold-up is an economically significant issue.

Alternative Markets and Structural Change

In its Poultry Grower Ranking Systems proposed rules GIPSA alleges that alternative broiler markets, including organic production, are not a viable alternative for many growers. USDA periodically publishes data on organic production ^{vii viii}. The current available data cover selected years from 2000 to 2014. As shown in figure 2, there has been rapid growth in organic production in the available USDA data.

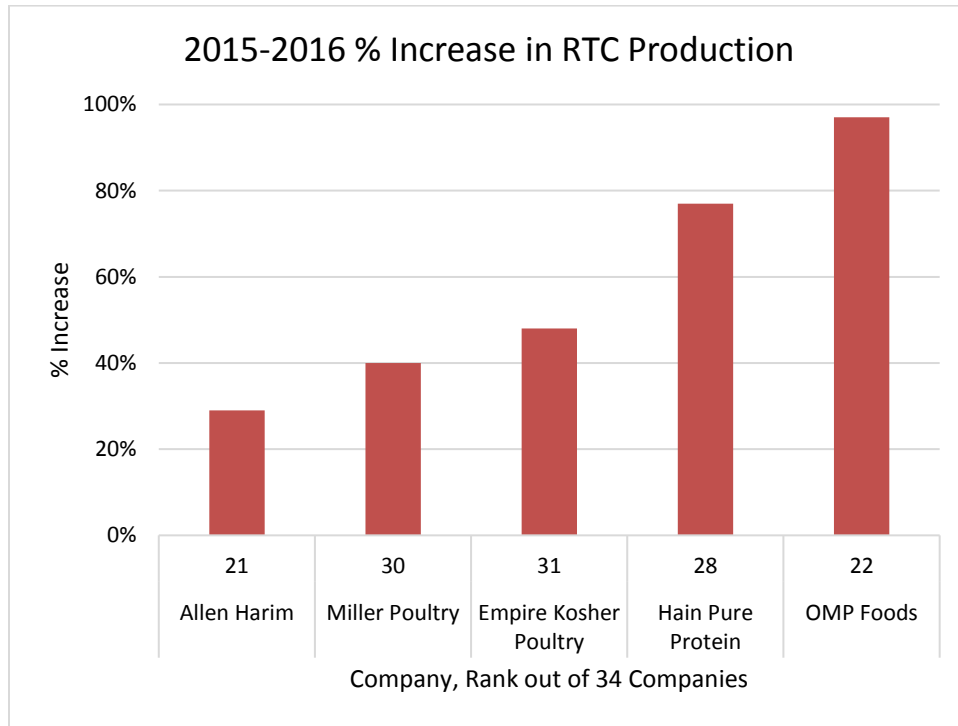
Since 2000 there has been increased interest in organic, antibiotic-free and free range broiler production. Antibiotic-free and free range production statistics are not available, but 2014 organic production accounted for 0.5% of total broiler production. While still small, this segment is growing more rapidly than overall broiler production.

Figure 2



Current growth of smaller companies taking advantage of rapid growth of organic, antibiotic-free, and other niche segments has been much faster than larger, less nimble, rivals. The five top 2016 fastest growing broilers producers in the Watt Publishing annual survey published in Poultry USA ^{ix} were all in the bottom 20 of the production rankings. The median growth rate in the 2016 Watt survey was +1%. Compare that to the growth of the five small companies shown below.

Figure 3



These small, innovative, companies are far outperforming their much larger competitors. They are demonstrating competitive behavior that does not depend on scale. They are innovating faster than larger companies, and producing products for rapidly growing niche markets. In the process they are creating opportunities for their contract grower partners.

Longer term, competition in the broiler sector has resulted in exits, mergers and market entry. From 1995 to 2016 the number of major producers tracked by Watt Publishing declined from 51 to 34. In most cases production assets of exiting companies were purchased by competitors. Many of the exits were smaller producers who merged with larger companies. However, size is no barrier to company failure. Of the 1995 top 10 companies, 5 are no longer in business, and #5 Pilgrim’s Pride declared bankruptcy, but survives as a subsidiary of JBS.

There were also 10 companies in the 2016 Watt rankings that did not exist in 1995. In total, they accounted for 10% of 2016 broiler production. Two of these, Koch Foods and Keystone foods, are in the top 10 of 2016 U.S. broiler production. Except for Empire Kosher, all of the fast-growing companies shown in figure 3 have entered since 1995.

Growth rates over 1995 to 2016 for many small and mid-size companies far exceeded their larger competitors, and the sector average. Tyson Foods, the #1 producer, grew 51.6% versus the industry average 73%. (table 5)

Table 5

1995 Ranking	2016 Ranking	Company	2016 Average Weekly Production million pounds, ready-to-cook w eight basis	Market Share 2016 %	1995-2016 RTC Change % Growth
1	1	Tyson Foods	174.29	20.0	51.6
2		Gold Kist			
3	4	Perdue Farms	62.40	7.2	48.6
4		ConAgra			
5	2	Pilgrim's Pride	142.20	16.3	468.8
6	6	Wayne Poultry	47.22	5.4	136.1
7		Hudson Foods			
8		Seaboard			
9	13	Foster Farms	19.75	2.3	64.6
10		Townsend's			
11		Cagle's			
12	15	Fieldale Corporation	16.00	1.8	45.5
13		Wampler-Longacre			
14		Marshall Durbin Companies			
15	3	Sanderson Farms	72.40	8.3	704.4
16	21	Allen Family Foods	8.57	1.0	7.1
17	17	O. K. Foods	13.59	1.6	81.2
18	18	Simmons Industries	13.32	1.5	122.0
19		Choctaw Maid Farms			
20		Campbell Soup/Herider Farms			
21		B. C. Rogers Poultry			
22	12	George's	21.49	2.5	329.8
23	7	Mountaire Corporation	46.63	5.3	832.6
24	16	Mar-Jac/Piedmont Poultry	15.40	1.8	242.2
25		Green Acre			
26	8	Peco Foods	29.21	3.3	549.1
27		Columbia Farms			
28		Zacky Foods			
29		Peterson Industries			
30		Rocco Foods			
31	19	Gold'n Plump Poultry	8.62	1.0	115.5
32	14	Case Foods	18.90	2.2	440.0
33	23	Harrison Poultry	5.10	0.6	45.7
34	31	Empire Kosher Poultry	1.23	0.1	-59.0
35	25	Golden Rod Broilers	3.49	0.4	16.3
36	20	Claxton Poultry	8.61	1.0	187.0
37	11	Amick Farms	21.80	2.5	772.0
38		Sylvest Poultry			
39		Burnett Produce			
40	9	House of Raeford	27.35	3.1	1267.5
41		Pennfield Farms			
42	24	Farmer's Pride	3.50	0.4	133.3
43		Lady Forest Farms			
44		Pederson's Fryers			
45		Draper Valley			
46		Park Farms			
47	32	Gentry Poultry	1.00	0.1	0.0
48		College Hill Poultry			
49		Lynden Farms			
50		Acme Poultry			
51		Dawn Poultry/Zartic			
		Not Present in 1995			
	5	Koch Foods	50.00	5.7	NA
	10	Keystone Foods	23.60	2.7	NA
	22	OMP Foods	6.30	0.7	NA
	26	MBA Poultry	2.62	0.3	NA
	27	Holmes Foods	2.39	0.3	NA
	28	Hain Pure Protein	1.77	0.2	NA
	29	Gerber's Poultry	1.50	0.2	NA
	30	Miller Poultry	1.34	0.2	NA
	33	Murray's Chickens	0.83	0.1	NA
	34	Agri Star Meat and Poultry	0.27	0.0	NA
		Total	872.69	100.0	73.0

In summary, broiler production is a highly competitive growth industry. There are winners, losers, and new entrants. Company growth rates vary widely. All of these dynamics are typical of an industry where companies compete keenly for the business.

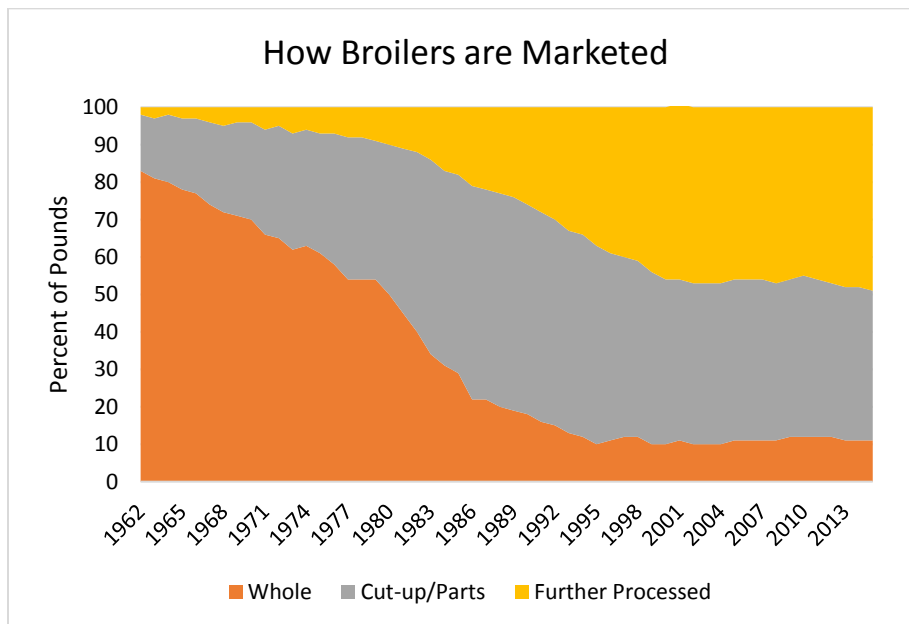
Broiler Production, Prices, and the Value of Innovation

Among all U.S. meat producers, the broiler sector has been the leader in innovation, production growth and export growth since at least 1960. At the same time, retail broiler prices have been much lower than, and decreased relative to, beef and pork.

The key to the industry’s success has been innovation in every dimension of the business. The vertically integrated nature of the business has given management the ability to take advantage of synergistic innovation spanning foundation genetics to end product research and development. Over time the sector has transformed itself from a supplier of a limited range of fresh and frozen chicken to a value-added supplier of thousands of value-added chicken products,

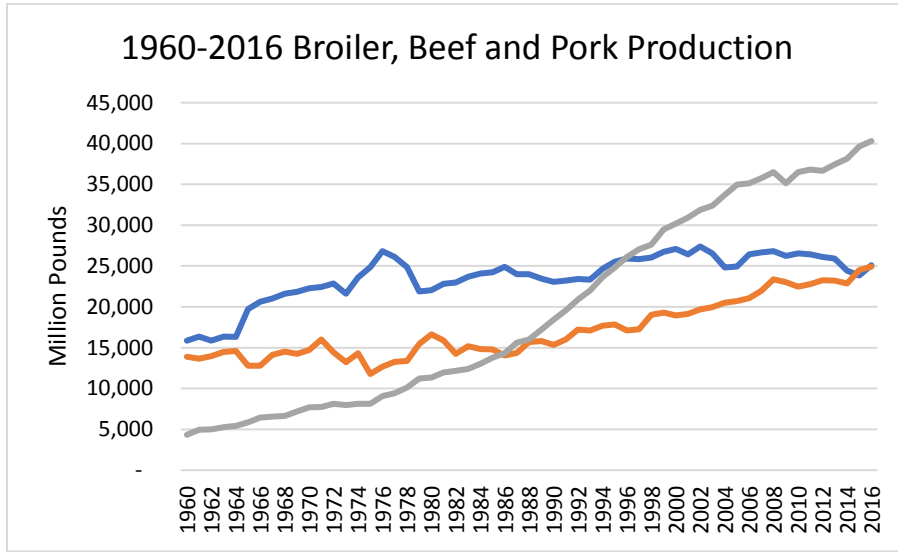
In 1962 broiler production trailed far behind beef and pork. (figure 5) Whole chicken sales were 80% of retail and foodservice volume ^x. In recent decades whole bird sales have declined to only a 10-12% share, parts sales are about 40%, and further processed almost 50%. The evolution in product sales in the three major categories is evidence of product innovation that has created thousands of chicken products that have found widespread consumer acceptance. (figure 4)

Figure 4



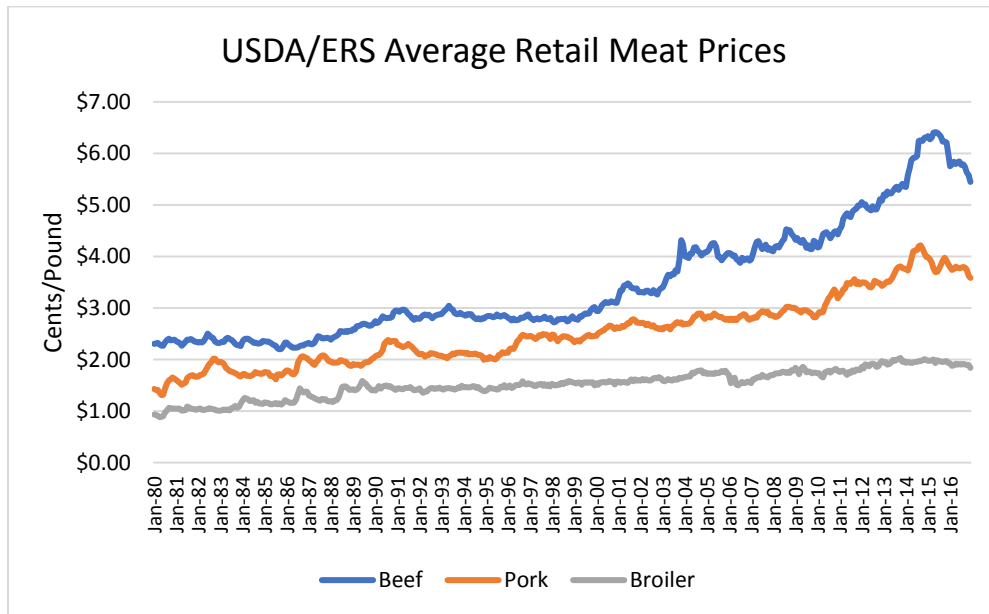
Rapid production, product and processing innovation has driven broiler production increases that have far outpaced beef and pork. In 1960 broiler production was a distant 3rd place behind the leaders, beef, and pork. (figure 5) In the mid-1990’s broilers passed beef to become the leading animal producing source in the U.S. ^{xi} Recent years have seen broiler production continue to grow faster than either beef or pork.

Figure 5



One major factor in broiler share of U.S. meat production has been the fact that broiler retail prices have been much lower than beef or pork, and have increased at a slower pace. Figure 6 shows USDA’s Economic Research Service retail price statistics for the three major U.S. meats^{xiii}. Innovation is the key factor enabling broiler integrators to offer low priced and increasingly less expensive meat relative to beef and pork. This competitive advantage would be harmed by regulations that slow innovation.

Figure 6



Part of the demand that led to rapid broiler production growth also came from outside the U.S. Until the 1990’s U.S. meat exports played a very minor role in overall demand. Since then

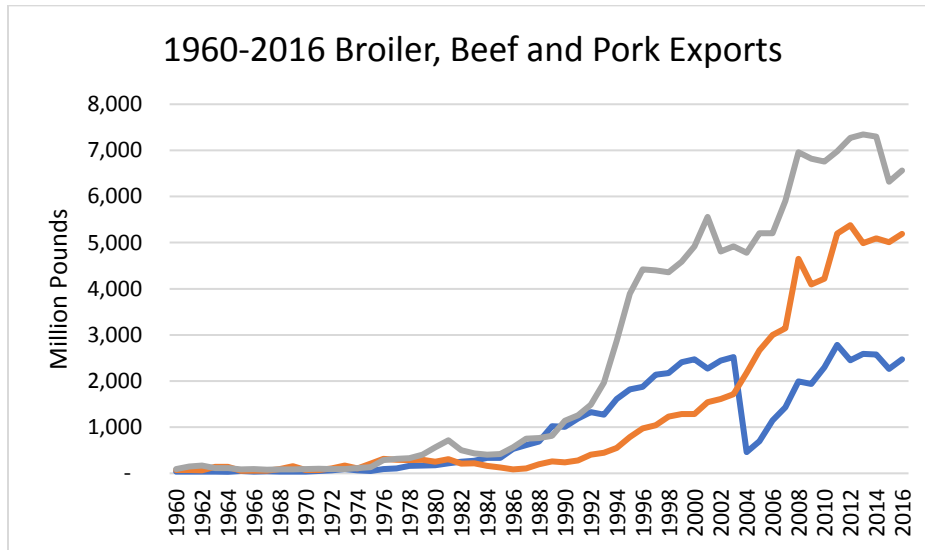
exports have increased more rapidly than production, and played a major role demand growth. (figure 7)

The 2003 drop in beef exports and the 2015 drop in broilers were both due to disease issues. For beef it was BSE and broilers Avian Flu. Despite the Avian Flu setback further long term export growth is expected, but at a slower rate than over the last 20 years.

A major driver for the rapid growth of U.S. broiler exports relative to beef and pork has been the price competitiveness shown above. Broiler exports are largely commodity dark meat parts that face intense price competition from other major broiler producers in Latin America and Europe. In a more general sense, broiler exports also compete with all other meats as well. Any slowing of U.S. broiler sector innovation would put our broiler exports at risk.

Given the competitive costs of producers such as Brazil, slowing innovation could also cause what have been very small U.S. import volumes to increase.

Figure 7



U.S. Broiler Sector Innovation Record

Basic statistics on major broiler production efficiency metrics are shown in table 6^{xiii}. Over time broilers have grown to heavier weights, on less feed per pound, and with lower death loss.

Table 6

Year	Average Days to Market	Market Weight, Pounds, Live	ADG, Grams	FCR	Feed/Bird, Pounds	Mortality, Percent
1925	112	2.50	10.12	4.70	11.75	18.0
1935	98	2.86	13.24	4.40	12.58	14.0
1940	85	2.89	15.42	4.00	11.56	12.0
1945	84	3.03	16.36	4.00	12.12	10.0
1950	70	3.08	19.96	3.00	9.24	8.0
1955	70	3.07	19.89	3.00	9.21	7.0
1960	63	3.35	24.12	2.50	8.38	6.0
1965	63	3.48	25.06	2.40	8.35	6.0
1970	56	3.62	29.32	2.25	8.15	5.0
1975	56	3.76	30.46	2.10	7.90	5.0
1980	53	3.93	33.63	2.05	8.06	5.0
1985	49	4.19	38.79	2.00	8.38	5.0
1990	48	4.37	41.30	2.00	8.74	5.2
1995	47	4.67	45.07	1.95	9.11	4.8
2000	47	5.03	48.54	1.95	9.81	4.6
2005	48	5.37	50.75	1.97	10.58	4.7
2010	47	5.70	55.01	1.95	11.12	4.0
2011	47	5.82	56.17	1.96	11.41	3.9
2012	47	5.95	57.42	1.91	11.36	3.7
2013	47	6.01	58.00	1.88	11.30	3.7
2014	47	6.12	59.06	1.89	11.57	4.3
2015	48	6.24	58.97	1.89	11.79	4.8
2016	47	6.22	60.03	1.86	11.57	4.5
%1925-2016	-58%	149%	493%	-60%	-2%	-75%

Compared to 1925, today’s broiler consumes the same amount of feed, but produces 149% more live weight in 58% fewer days, and death loss is 75% lower. Innovations in genetics, feed, grower housing and medications have all made significant contributions to this record. Daily gain has increased from 10 to 60 grams. Faster gains improve the financial performance of grower houses by increasing production per day and per square foot. These efficiency gains are the fundamental drivers of the long-term price and market share trends shown earlier.

Implications for Grower Pay and Housing Performance

Table 7^{xiv xv xvi} translates performance improvements into what innovation means for broiler grower income. In current dollars, average grower payments per live pound increased in all but three years from 1990 to 2016. In total, average payment per pound increased by 57.4%. Grower payments per live pound, in 2009 constant dollars, have decreased slightly since 1990. However, the increase in broiler growth rates shown above in table 6 has improved housing efficiency from 33.12 live pounds produced per square foot per year to 39.93 in 2016, or 20.6%. That increase

more than offsets the decline in \$2009 payments per pound. Grower payments per square foot, in constant \$2009, increased from \$2.02 in 1990 to \$2.30 in 2016, or 13.8%. In current dollars, these payments increased from \$1.35 in 1990 to \$2.56 in 2016, an 89.7% increase.

Table 7

Year	Average Grower Payment, Cents/Lb., Current Dollars	Average Grower Payment, Cents/Lb., \$2009	Live Young Chicken Production, 000 Pounds	Total Grower Payments, \$2009, \$000	% Change	Live Pounds Per Sq. Foot	Average Grower Payments, Per Sq. Foot, Current Dollars	Average Grower Payments, Per Sq. Foot, \$2009
1990	4.08	6.10	25,549,696	\$1,559,563	13.2%	33.12	\$1.35	\$2.02
1991	4.11	5.95	27,170,780	\$1,617,098	3.7%	33.44	\$1.37	\$1.99
1992	4.14	5.86	28,997,878	\$1,699,672	5.1%	33.77	\$1.40	\$1.98
1993	4.22	5.84	30,474,243	\$1,778,349	4.6%	34.09	\$1.44	\$1.99
1994	4.23	5.73	32,765,941	\$1,876,751	5.5%	34.77	\$1.47	\$1.99
1995	4.32	5.73	34,352,980	\$1,968,417	4.9%	34.93	\$1.51	\$2.00
1996	4.30	5.60	36,034,815	\$2,018,442	2.5%	34.75	\$1.49	\$1.95
1997	4.46	5.71	37,207,401	\$2,125,103	5.3%	34.87	\$1.56	\$1.99
1998	4.53	5.74	38,054,849	\$2,183,929	2.8%	35.26	\$1.60	\$2.02
1999	4.68	5.85	40,444,167	\$2,364,063	8.2%	36.09	\$1.69	\$2.11
2000	4.78	5.84	41,293,525	\$2,410,344	2.0%	36.23	\$1.73	\$2.11
2001	4.87	5.81	42,335,507	\$2,461,631	2.1%	36.03	\$1.75	\$2.09
2002	4.81	5.66	43,715,247	\$2,472,605	0.4%	34.64	\$1.67	\$1.96
2003	4.90	5.65	44,317,531	\$2,503,671	1.3%	37.22	\$1.82	\$2.10
2004	5.04	5.66	46,109,201	\$2,607,670	4.2%	38.56	\$1.94	\$2.18
2005	5.24	5.70	47,578,696	\$2,710,359	3.9%	39.15	\$2.05	\$2.23
2006	5.39	5.68	48,332,516	\$2,747,672	1.4%	38.97	\$2.10	\$2.22
2007	5.43	5.58	49,089,999	\$2,738,429	-0.3%	38.56	\$2.09	\$2.15
2008	5.64	5.68	49,780,767	\$2,829,764	3.3%	38.84	\$2.19	\$2.21
2009	5.62	5.62	47,613,466	\$2,675,877	-5.4%	38.19	\$2.15	\$2.15
2010	5.67	5.60	49,314,757	\$2,762,281	3.2%	38.48	\$2.18	\$2.16
2011	5.78	5.59	49,559,126	\$2,772,606	0.4%	39.40	\$2.28	\$2.20
2012	5.85	5.56	49,350,169	\$2,743,761	-1.0%	39.07	\$2.29	\$2.17
2013	5.93	5.55	50,357,463	\$2,793,005	1.8%	39.12	\$2.32	\$2.17
2014	6.19	5.69	51,225,964	\$2,913,401	4.3%	39.52	\$2.45	\$2.25
2015	6.27	5.70	53,166,030	\$3,030,491	4.0%	40.03	\$2.51	\$2.28
2016	6.42	5.76	54,037,067	\$3,112,907	2.7%	39.93	\$2.56	\$2.30
% Change	57.4%	-5.6%	111.5%	99.6%	NA	20.6%	89.7%	13.8%

The last 2 columns in table 7 are a much better overall indicator of grower returns than payment per live pound. There is a sharing of the gains from increased live broiler performance. The integrator, who furnishes the feed and medications to the grower at no cost, benefits from better feed efficiency. The live bird grower benefits faster growth rates resulting in increased pounds produced per square foot of the houses he furnishes the integrator. The innovation that makes these improvements possible is a joint effort of the integrator and the grower. For the grower's part, broiler housing must be adapted over time to take advantage of the evolving genetics and feed improvements furnished by integrators that make the growth in pounds produced per square

foot possible. If growers do not invest when potential efficiency gains outweigh costs, both the grower and the integrator suffer.

Another implication of the increase in grower housing efficiency is that fewer square feet of housing are required to produce any given amount of broiler meat. From 1990 to 2016 the increase in production per square foot reduced the amount of grower housing required by a cumulative 278 million square feet, or 6,387 acres. At the current \$9.66 per square foot cost of these houses and related investments shown in the University of Maryland study cited earlier the avoided grower investment is \$2.7 billion not required to produce the 2016 broiler supply.

In his analysis MacDonald did not mention housing productivity as a contributor to long term grower housing productivity and income growth. Nor does GIPSA acknowledge this factor as an important contributor to grower income and welfare. Rather, their focus was exclusively on payments per pound.

As will be discussed, the current GIPSA proposal on ranking systems could seriously impede grower-owned housing investment incentives. If grower investments are reduced, so is grower housing productivity, and long term grower income potential.

Neither McDonald or GIPSA also acknowledge the full degree to which growers are insulated from market risk by the current contracting system. The integrator supplies the grower with baby chicks, feed, and all medications. The integrator pays a contract fee to the grower and sells the finished chicken products into a highly competitive market. The integrator bears the full risk of volatile feed ingredient prices, production risks inherent in producing baby chicks, costs risks of medication requirements, and price risks in the finished chicken product market. The major grower financial risk is utilities and fuel costs for their operations.

In a 1995 journal article the authors concluded that chicken companies remove approximately 97% of the economic risk from growers, compared to independent growers who bear all risks on their own.^{xvii} The fact that growers are insulated from significant price and production risks stabilizes their income stream and enables them to obtain credit on more favorable terms. Integrators established this system with the express purpose of creating live production based on low risk, financially stable farms that could supply a steady stream of high quality birds suitable for end products. Absent these arrangements, history showed that independent live producers bearing the full risks of feed and chicken price volatility was not as reliable a production source.

Consequences of Proposed Rule on Grower Ranking Systems

GIPSA has proposed implementation of a grower ranking system based on what they call a Consistency Management System, or CMSⁱⁱ. This system would theoretically correct rankings within grower ranking cohorts for variations in feed, medications, chick quality, target end weights, bird density, and other possible factors, including grower housing quality. There are significant theoretical and practical issues with such a system.

GIPSA itself states that feed and medications are not an issue. The GIPSA proposed grower ranking rules document statesⁱⁱ: “The U.S. Food and Drug Administration (FDA) approves all medication that can be administered to broilers that are grown for human consumption. GIPSA believes that integrators would not alter medication to such an extent that inferior medicine is

consistently supplied to a grower and that this criterion would not be costly to the industry.” (page 31)

“GIPSA also believes that feed provided by integrators would be consistent across a group of growers and that this criterion would not be costly to the industry. Feed is produced by integrators at a feedmill and the same batch of feed is distributed to growers until more feed is produced and then that feed is distributed. The process of the production and distribution of feed ensures consistency across the group of growers that receive the same batch of feed. Once a batch of feed is produced, integrators truck it to growers according to established routes and schedules. All growers on the same route should receive feed of similar quality.” (page 32)

However, GIPSA still proposes to mandate measuring impact of chick quality, feed, medications, bird density, possibly housing type, and other factors on grower performance and pay.

Based on GIPSA’s own proposed rule document, feed and medications should not be included as important factors in grower performance variation.

Bird density is a potential factor in bird performance. If birds are stocked at a density higher than optimal, performance will suffer. Like feed and medication, if bird performance suffers, so does the integrator’s sales and profit.

In practice, growers receive chicks from breeder farm flocks that are scheduled years ahead of chick delivery to a grower. The chicks supplied to a grower often come hatcheries supplied by several breeder flocks. Even if an integrator wanted to segregate chick quality, the logistics would be difficult, and results undependable.

While not explicitly mentioned in the GIPSA proposed rule, correcting for housing type and quality would have potentially serious implications for future innovation, productivity gains, and investment. These issues go the heart of the broiler sector’s competitive strengths.

Depending on construction date, maintenance and subsequent capital improvements, grower houses will vary in potential performance. Integrators often pay premiums for improved housing. Those premiums are paid in expectation of improved bird performance. The premiums are not discriminatory, they are based on an agreement between the grower and the integrator. If a grower is not willing to make improvements, and performance and pay suffers relative to those that have made improvements, the system is operating as intended. Not penalizing growers for operating obsolete housing would result in under-investment and slower efficiency gains.

The MacDonald paper (page 20) contains a 2011 snapshot of the state of broiler housing technology. (table 8) Table 8 shows that newer broiler houses are larger, and have higher levels of technology than older houses. The original 2010 GIPSA draft rules proposed to group ranking by growers with “like housing.” The current § 201.214(d) proposal ⁱⁱ could be interpreted to include “like housing” as a possible basis for ranking growers. (pages 9-10)

Table 8

Broiler housing and technology, by vintage							
Year house was built	Share of all houses	Mean size	Side curtains	Evaporative cooling	Tunnel ventilation	Integrated electronic controls	Static pressure-controlled vent boxes
	<i>Percent</i>	<i>Sq. Ft.</i>	<i>Percent of houses with technology</i>				
Pre-1970	1.3	11,930	77	52	56	37	43
1970-74	1.5	13,922	65	63	70	44	59
1975-79	4.6	14,950	65	58	63	53	65
1980-84	4.2	15,695	55	77	83	66	79
1985-89	15.5	16,019	48	82	86	77	83
1990-94	19.2	18,027	54	87	90	82	88
1995-99	19.7	18,797	59	88	92	87	89
2000-04	14.2	20,383	39	96	97	96	96
2005-09	13.9	22,786	22	97	99	98	98
2010-11	2.9	24,887	13	98	100	100	99
Refused	3.0	16,018	60	67	77	70	72
All	100.0	18,618	48	86	90	84	87

Source: USDA Agricultural Resource Management Survey, 2011, version 4. Contract growers only. The row labeled "refused" covers survey respondents who did not provide a response for housing attributes. There were 66,680 houses in total.

Under proposed rule § 201.214(d): “Proposed § 201.214(d) provides that the Secretary may consider whether the live poultry dealer has demonstrated a legitimate business justification for conduct that may otherwise be unfair, unjustly discriminatory, or deceptive, or that gives an undue or unreasonable preference or advantage to any poultry grower or subjects any poultry grower to an undue or unreasonable prejudice or disadvantage. A legitimate business justification for certain conduct may be sufficient to find that the conduct does not violate the P&S Act. We request comment on the types of conduct that might be considered for a legitimate business justification, in order to give further context to this provision in the final rule.”

“Concurrent with the publication of this proposed rule, GIPSA is also proposing another rule in this issue of the Federal Register that, among other things, would clarify the conduct or action by packers, swine contractors, or live poultry dealers that GIPSA considers unfair, unjustly discriminatory, or deceptive and a violation of section 202(a) of the P&S Act. Specifically, this proposed rule includes § 201.210, “Unfair, unjustly discriminatory, or deceptive practices or devices by packers, swine contractors, or live poultry dealers,” which includes in paragraph (b) a non-exhaustive list of conduct or action that, absent demonstration of a legitimate business justification, GIPSA believes is unfair, unjustly discriminatory, or deceptive and a violation of section 202(a) of the P&S Act, regardless of whether the conduct harms or is likely to harm competition. Currently, proposed § 201.210(b) contains nine examples. In this rule, GIPSA is

proposing to add to proposed § 201.210(b) a tenth example, § 201.210(b)(10) GIPSA also considers a live poultry dealer’s failure to use a poultry grower ranking system in a fair manner after applying the criteria in § 201.214 to be an unfair, unjustly discriminatory, or deceptive practice or device and a violation of section 202(a) of the P&S Act regardless of whether it harms or is likely to harm competition.”

Table 8 also shows that there is a very diverse population of broiler housing with a wide range of technology implementation. The wide range of housing equipment employed, size and age, would make ranking on housing type a difficult, if not impossible, task. Since rankings are typically made over a limited time period, often a week, it would be the case that there are frequently not enough similar houses to make meaningful comparisons within housing type.

A model of the number of flocks available for ranking in a week was constructed to show the extent of this issue. Three projections were made. The first two are based on a 2016 University of Maryland live broiler production publication ^{xviii}. This projection is for new construction, 33,000 square foot, broiler houses. Both large and small bird production was modeled based on these large, modern, houses.

Based on the Maryland publication, for large birds the following assumptions were made:

1. 8.5 pound end weight in 56 days ^{xix}
2. 14 days between flocks
3. All-in all-out flocks for all 4 houses per farm
4. .75 square feet/bird

The assumptions yielded the following results for integrator plants processing between 1,500,000 and 500,000 birds per week (table 9).

Table 9

Grower Operation Statistics							Integrator Statistics				
Birds/Week	Liveweight, Pounds	Age, Days	Total Days	Turns /Year	Birds/Flock /Turn	Total Birds/Year	Flocks Delivered /Week	Flocks Delivered /Year	Total Number of Houses	Houses /Farm	Farms
1,500,000	8.5	56	70	5.2	168,960	881,006	8.9	462	354	4	89
1,250,000	8.5	56	70	5.2	168,960	881,006	7.4	385	295	4	74
1,000,000	8.5	56	70	5.2	168,960	881,006	5.9	308	236	4	59
750,000	8.5	56	70	5.2	168,960	881,006	4.4	231	177	4	44
500,000	8.5	56	70	5.2	168,960	881,006	3.0	154	118	4	30

As can be seen in table 9, even with a large plant, only 8.9 flocks are required per week. As shown in table 10, if required to break out rankings by housing type, the number of flocks available is quickly reduced for all plant sizes as the number of housing types increase.

Table 10

Number of Housing Types and Flocks per Type					
Birds/Week	1	2	3	4	5
1,500,000	8.9	4.4	3.0	2.2	1.8
1,250,000	7.4	3.7	2.5	1.8	1.5
1,000,000	5.9	3.0	2.0	1.5	1.2
750,000	4.4	2.2	1.5	1.1	0.9
500,000	3.0	1.5	1.0	0.7	0.6

If there are as many as 3 housing types, ranking becomes problematic for even a large processing plant, and impossible for smaller plants.

If we reduce the bird size to 4 pounds the number of flocks per year increases, age declines to 32 days^{xx}, days between flocks declines to 46, and stocking density increases to as high as .6 square feet/bird. Fewer flocks per week are required. As shown in table 11, that is because each flock will have more birds. The processing plant is limited by birds that can be processed per day, not pounds of meat produced.

Table 11

Grower Operation Statistics							Integrator Statistics				
Birds/Week	Liveweight, Pounds	Age, Days	Total Days	Turns /Year	Birds/Flock /Turn	Total Birds/Year	Flocks Delivered /Week	Flocks Delivered /Year	Total Number of Houses	Houses /Farm	Farms
1,500,000	4.0	32	46	7.9	211,200	1,675,826	7.1	369	186	4	47
1,250,000	4.0	32	46	7.9	211,200	1,675,826	5.9	308	155	4	39
1,000,000	4.0	32	46	7.9	211,200	1,675,826	4.7	246	124	4	31
750,000	4.0	32	46	7.9	211,200	1,675,826	3.6	185	93	4	23
500,000	4.0	32	46	7.9	211,200	1,675,826	2.4	123	62	4	16

The ranking by house type issue for small bird plants is more severe than for big birds. (table 12)

Table 12

Number of Housing Types and Flocks per Type					
Birds/Week	1	2	3	4	5
1,500,000	7.1	3.6	2.4	1.8	1.4
1,250,000	5.9	3.0	2.0	1.5	1.2
1,000,000	4.7	2.4	1.6	1.2	0.9
750,000	3.6	1.8	1.2	0.9	0.7
500,000	2.4	1.2	0.8	0.6	0.5

As bird size decreases, the feasibility of ranking by house type becomes even more critical.

The third scenario is based on national average statistics from the MacDonald study^v. The major assumptions were:

1. A much smaller 18,618 average square feet per house
2. 6.1 pound end weight in 49.5 days (current standard is 43 days^{xviii})

3. 17 days between flocks
4. All-in all-out for all 4.3 average houses on a farm
5. .70 square feet/bird

The smaller houses produce fewer birds per flock, and more flocks are required per day. The houses per farm is almost the same as the first two scenarios. The averages are a blend of large and small birds.

Table 13

Grower Operation Statistics							Integrator Statistics				
Birds/Week	Liveweight, Pounds	Age, Days	Total Days	Turns /Year	Birds/Flock /Turn	Total Birds/Year	Flocks Delivered /Week	Flocks Delivered /Year	Total Number of Houses	Houses /Farm	Farms
1,500,000	6.1	49.5	66.5	5.5	109,793	602,764	13.7	710	556	4.3	129
1,250,000	6.1	49.5	66.5	5.5	109,793	602,764	11.4	592	464	4.3	108
1,000,000	6.1	49.5	66.5	5.5	109,793	602,764	9.1	474	371	4.3	86
750,000	6.1	49.5	66.5	5.5	109,793	602,764	6.8	355	278	4.3	65
500,000	6.1	49.5	66.5	5.5	109,793	602,764	4.6	237	185	4.3	43

Even with the higher number of flocks delivered per day, as the number of housing types quickly decreases the ability to make meaningful rankings, and is severely compromised for smaller plants. (table 14)

Table 14

Birds/Week	Number of Housing Types and Flocks per Type				
	1	2	3	4	5
1,500,000	13.7	6.8	4.6	3.4	2.7
1,250,000	11.4	5.7	3.8	2.8	2.3
1,000,000	9.1	4.6	3.0	2.3	1.8
750,000	6.8	3.4	2.3	1.7	1.4
500,000	4.6	2.3	1.5	1.1	0.9

At the current state of the industry the ability to make valid comparisons by housing type that would not result in grower complaints is questionable. With the trend to fewer grower operations and larger houses, over time the number of flocks delivered per week will decline for any given plant capacity, and the issue will become even more severe.

A related factor in the feasibility of using housing type as a grouping criteria is the increasing complexity of live production requirements based on fragmentation that is inherent in the trend to increasing organic and antibiotic-free practices. To the extent that these requirements also demand ranking segmentation the population of like houses in any given time period is also reduced.

Another aspect of chicken production that is very dynamic, and has affected performance grouping, is trends in bird weights. Over the past decade there has been a dramatic shift to heavier birds in the production mix. Heavier birds are on feed longer, and have use more feed per pound of end weight, compared to lighter birds.

In 2005 birds weighing 7.76 pounds and more accounted for very little production ^{xxi}. (table 15, figure 8, figure 9) By 2016 those heavy birds were the single largest category in pounds, and had grown at the expense of birds weighing under 6.26 pounds. The production mix that was dominated by bird weights under 6.26 pounds in 2005 is now much more diverse, making comparisons increasingly difficult over time. Adding housing type to this more diverse weight mix could further reduce the flock numbers that can be used for comparisons.

Table 15: Young Chicken Slaughter, 000 Head and 000,000 Live Pounds - Categories in Pounds

Year	4.25 & Down		4.26 - 6.25		6.26 - 7.75		7.76 & up	
	Head	Pounds	Head	Pounds	Head	Pounds	Head	Pounds
2005	2,441,171	9,130	3,997,751	21,348	1,397,172	9,668	507,102	4,270
2006	2,355,406	8,903	4,147,947	22,440	1,163,904	8,089	683,922	5,636
2007	2,222,059	8,399	4,158,652	22,457	1,364,973	9,487	656,891	5,485
2008	2,138,506	8,169	4,073,657	21,998	1,261,007	8,587	923,799	7,649
2009	2,047,148	7,861	4,161,213	22,512	1,150,016	7,878	884,603	7,378
2010	2,005,002	7,679	3,936,970	21,338	1,367,565	9,231	1,025,357	8,603
2011	1,856,928	7,038	3,469,804	18,772	1,541,869	10,408	1,217,099	10,199
2012	1,922,297	7,266	3,202,051	17,291	1,522,143	10,335	1,228,014	10,438
2013	2,140,619	8,027	2,826,338	15,347	1,546,918	10,457	1,455,038	12,499
2014	2,077,788	7,688	2,784,010	15,006	1,534,545	10,450	1,566,181	13,735
2015	2,070,131	7,680	2,617,731	14,240	1,701,255	11,841	1,732,642	15,767
2016	2,089,759	7,732	2,573,455	14,128	1,858,391	12,990	1,722,453	15,847
% Change	-14%	-15%	-36%	-34%	33%	34%	240%	271%

Figure 8

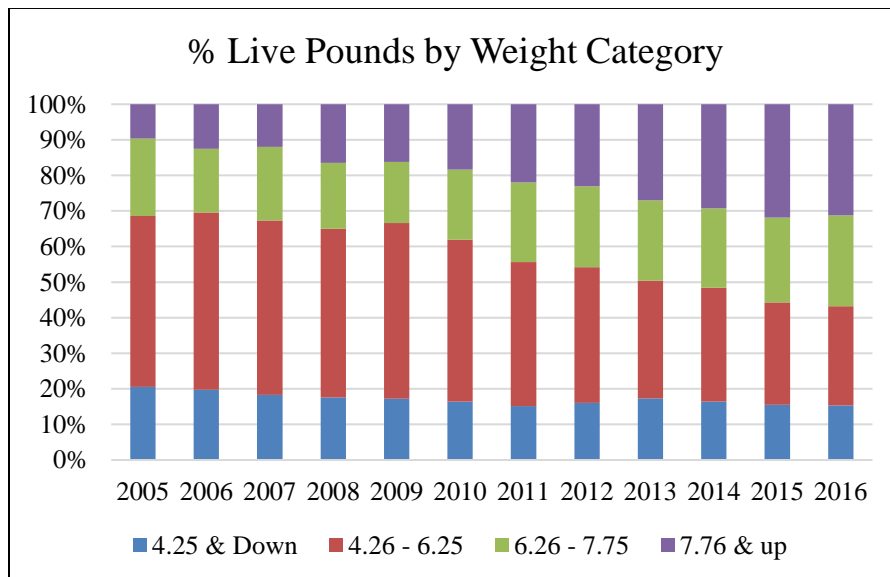
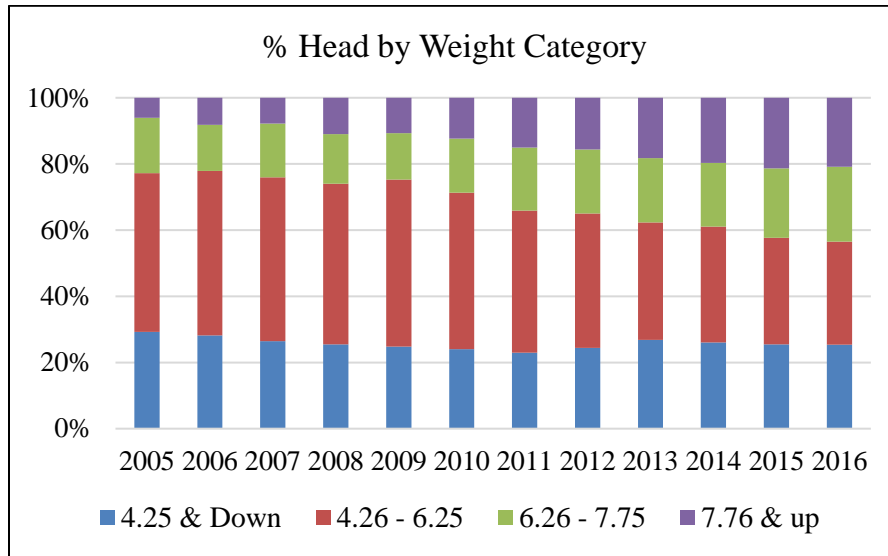


Figure 9



Even if meaningful housing type comparisons could be made, there is a much more serious issue. To the extent that growers are ranked within housing type they are not compared to growers with other housing types. Growers with older, outdated, low productivity housing would be grouped together and ranked. As a group, these growers might not be penalized compared to growers with newer or updated housing.

One remedy would allow the integrator to set significantly different payment scales by housing type group. Unless different payment scales are allowed, correcting grower rankings for housing type could reduce, or even eliminate, incentives for investments in existing housing. Such a ranking system would tend to lock in housing technology as of the date of its implementation. Long term gains in broiler production efficiency could be seriously compromised if housing investment incentives are reduced by holding growers harmless for less productive housing types. Grower income could also suffer if gains in broiler pounds produced per square foot are reduced.

However, if integrators are allowed to differentiate payment terms by housing type, this would not be materially different from the current system of pooling all growers, regardless of housing conditions.

GIPSA did not account for potential reduction in grower investment incentives flowing from the implementation of a CMS in its evaluation of costs. If housing type were to become a basis for discrimination, and GIPSA were to insist on similar payment scales by housing type, the results could be similar to those estimated for the original 2010 GIPSA proposed rules by this author^{xxii}. In that study just the feed cost consequences of reduced productivity gains were estimated at \$644 million over the first five years.

In summary, if housing type is eventually included in the CMS, that factor could hold producers harmless for housing that is less productive than it could be with further investments. It could also penalize producers who have made investments, and as a result have the most productive

housing. Over the long term, all growers would be penalized if gains in productivity and income per square foot of their housing slows.

By pooling all broiler houses for ranking purposes the producers who have made investments to increase productivity are rewarded, and those who have not are penalized. The current system provides incentives to maintain and improve housing quality that promotes the interests of both the grower and the integrator. Any CMS with housing type included could severely reduce investment incentives, and could discriminate against those producers who have made past investments.

Lack of Factual Justification for CMS

Finally, the CMS mandate is being proposed without regard to whether there is factually undue discrimination by integrators among their growers. In justifying its ranking system proposal GIPSA frequently cites “complaints” and “commentsⁱⁱⁱ” The proposed rule does not cite any factual studies or data to demonstrate that ranking systems in fact discriminate against individual growers or groups of growers.

GIPSA has the authority to obtain the necessary production records history from integrators to construct a statistical model to test the hypothesis that discrimination based on the factors that would be included in the proposed CMS exists. Prior to mandating such a system GIPSA should determine if the proposed regulation is required, or is only the result of hearing unsubstantiated grower allegations that GIPSA, or an independent third party, has not investigated to determine their validity.

Costs of Proposed CMS Rule on Grower Ranking Systems

GIPSA has not specified how the proposed CMS is to be constructed, implemented or monitored by GIPSA. Also, GIPSA has ignored the possibility that such a system could result in a re-ordering of historical grower rankings, leading to litigation if historically high-ranking growers decline in rank and bonus payments. If housing type is included as a grower ranking correction factor, producers who have invested in improvements could perceive that the value of those investments has been impinged. This could also lead to litigation based on alleged integrator discrimination against the best and most productive growers.

GIPSA has made estimates of the specific administrative costs of establishing the CMS system, revising contracts and preparing grower revenue projections for investment decisions. In this process GIPSA has made numerous assumptions about time requirements and compensation rates. No data other than national average wage rates are presented to validate the assumptions. No estimate of ongoing costs for operating and monitoring a CMS is estimated. No estimate of potential litigation if grower rankings shift is presented.

Implementation, administration and litigation costs could be significantly more than those in the GIPSA. Even so, they will be small compared to the potential costs to integrators and growers of reduced incentives for investments in existing broiler housing.

Economy-Wide Impact

The broiler sector is a major contributor to the U.S. economy. The industry directly employs 355 thousand workers, pays about \$20 billion in wages, and contributes about \$126 billion of product end value. Including the indirect supply chain economic impact adds another \$187 billion of economic activity ^{xxiii xxiv xxv}.

Broiler integrators directly support about 16,000 live broiler production farmers ^v, and many more who grow the feed the broilers consume. All the companies and farmers supplying broiler integrators are responsible for an additional 429 thousand jobs and \$27 billion in wages. The industry pays about \$24 billion in annual taxes, \$16 billion federal and about \$8 billion state and local.

The current scale and impact of the broiler sector is largely based on a long record of successful productivity gains and product innovation that has taken chicken from a minor protein source to by far the most widely consumed U.S. protein. The proposed GIPSA rule, especially the possibility of segregation of grower rankings by housing type, represents a significant threat to the future growth and success of this major portion of the U.S. meat protein supply.

As currently structured, the GIPSA proposal could slow live production innovation, increase costs, and thus harm the sector's competitive advantage over other protein sources in the U.S. and globally. Both integrators, and their farmer live production partners, would suffer as a result. Consumers would see increases in broiler prices, direct and indirect job creation would slow, and the economy would be worse off, not better.

Citations

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- ⁱⁱ Federal Register, 9 CFR Part 201, RIN 0580-AB26, Poultry Grower Ranking Systems, December 20, 2016.
- ⁱⁱⁱ Federal Register, 9 CFR Part 201, RIN: 0580-AB25, Scope of sections 202(a) and (b) of the Packers and Stockyards Act, December 20, 2016
- ^{iv} Federal Register, 9 CFR Part 201, RIN: 0580-AB27, Unfair Practices and Undue Preferences in Violation of the Packers and Stockyards Act, December 20, 2016.
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- ^{xiv} Average grower payments and live pounds produced per square foot obtained from Agri Stats, March 3, 2017.
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