

INDUSTRY TREND REPORT: ANIMAL FEED MANUFACTURING

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The animal feed manufacturing industry is defined to encompass businesses primarily engaged in manufacturing food and feed for animals from ingredients such as grains, oilseed mill products, and meat products as well as vitamins and nutrients. There are two principal segments in this industry: dog and cat food (NAICS 311111); and livestock feed (NAICS 311119).

This report provides an overview of the U.S. animal feed manufacturing industry from 2000 to 2009 using the Census Bureau's Annual Survey of Manufacturers (www.census.gov/manufacturing/asm/index.html). Its purpose is to provide a snapshot of the trends in the critical areas of employment, payroll, cost of material, value of shipments, and value added to aid both public and business policymakers in framing strategies to aid business and local competitiveness.

The animal feed manufacturing industry is relatively fragmented across the country but concentrated in terms of companies. For example, the top four states accounted for 25.1% of total employment in 2009. They were California (9.8%), Pennsylvania (7.2%), Texas (7.0%), and Ohio (6.8%). The concentration ratios in terms of value of shipment and value added (Table 1) show a relatively more concentrated industry, especially in the dog and cat food segment, where the top four companies accounted for 71% of the value of shipment and about 87% of value added in 2007. The livestock feed segment is less concentrated, with the top four companies accounting for between 28% and 30% of total industry value added or value of shipment. The 2007 numbers are higher than those of 2002, pointing to a concentration trend, a result of the search for scale economies through acquisitions and mergers as well as attrition.

TABLE 1: INDUSTRY CONCENTRATION METRICS (2007)

Year	Value of Shipment				Value Added			
	CR4	CR8	CR20	CR50	CR4	CR8	CR20	CR50
Total Industry	31.4	45.3	61.0	74.5	43.9	55.5	68.5	79.1
Dogs & Cats	71.0	83.5	98.2	100.0	77.6	86.9	93.9	98.3
Livestock	30.1	40.4	56.2	69.8	28.3	39.8	54.2	68.0

Source: Census Bureau 2002 Economic Census, American FactFinder, release date 5/23/2006, http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=&-ds_name=EC0731SR13.

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INDUSTRY EMPLOYMENT

Total industry employment comprises production and non-production employees.

Production workers include all employees up to factory supervision level and cover those involved with processing, fabricating, assembling, packaging, maintenance, janitorial, product development, and all activities closely related to production operations. Non-production employees are those above factory supervision level in the manufacturing establishment, including sales, marketing, financial, clerical and legal.

The average annual growth rate (AAGR) in total employment in the industry from 2000-2009 is -0.99%. Peak employment of 49,549 occurred in 2001 and the employment level in 2009 was 44,805. During the 2007-2009 recession, employment levels declined by 3%, less than the 5% reduction during the 2000 recession. Production workers accounted for an average of 66% (standard deviation of 2%) of total employees and their AAGR was -0.62%, implying a steeper decline for non-production workers over the period.

There are two principal industry categories in the animal feed manufacturing industry: dog and cat food; and livestock (poultry, dairy, swine, beef, etc.) feed. Total employment in the dog and cat food segment peaked in 2009 at 17,107 and were lowest at 14,146 in 2001 (Figure 1), with an AAGR of 1.88%. Production workers in the dog and cat food segment peaked at 13,045 in 2007, growing at an AAGR of 1.58% and accounted for between 75% and 79% of total segment workers over the period. Losses during the recession were less than 0.5% for production workers compared to 5.5% reduction for non-production workers.

FIGURE 1: DISTRIBUTION OF TOTAL EMPLOYMENT IN ANIMAL FEED MANUFACTURING INDUSTRY

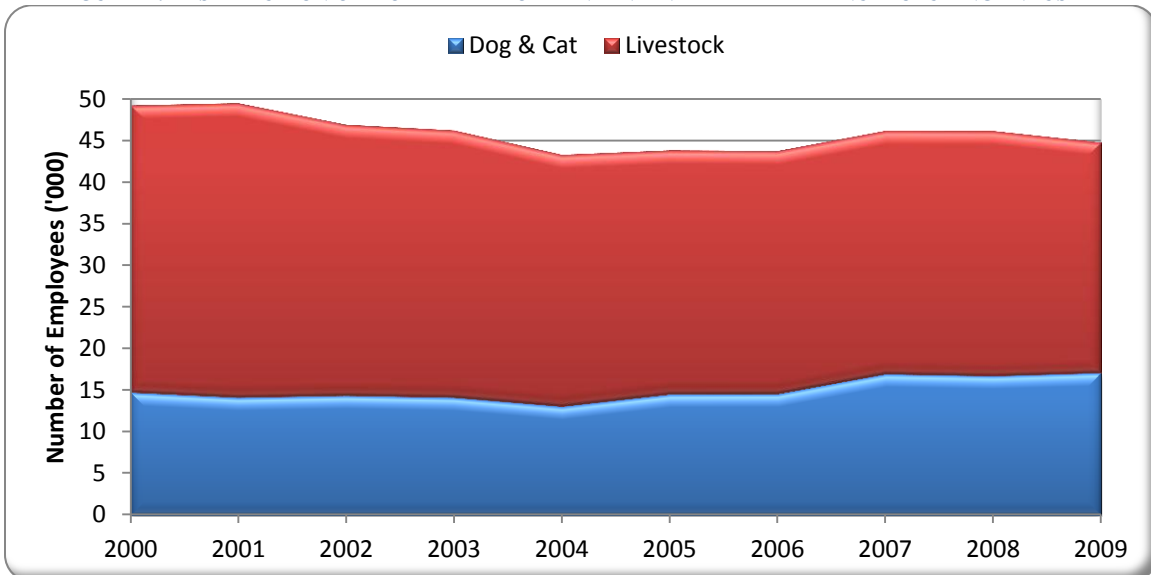


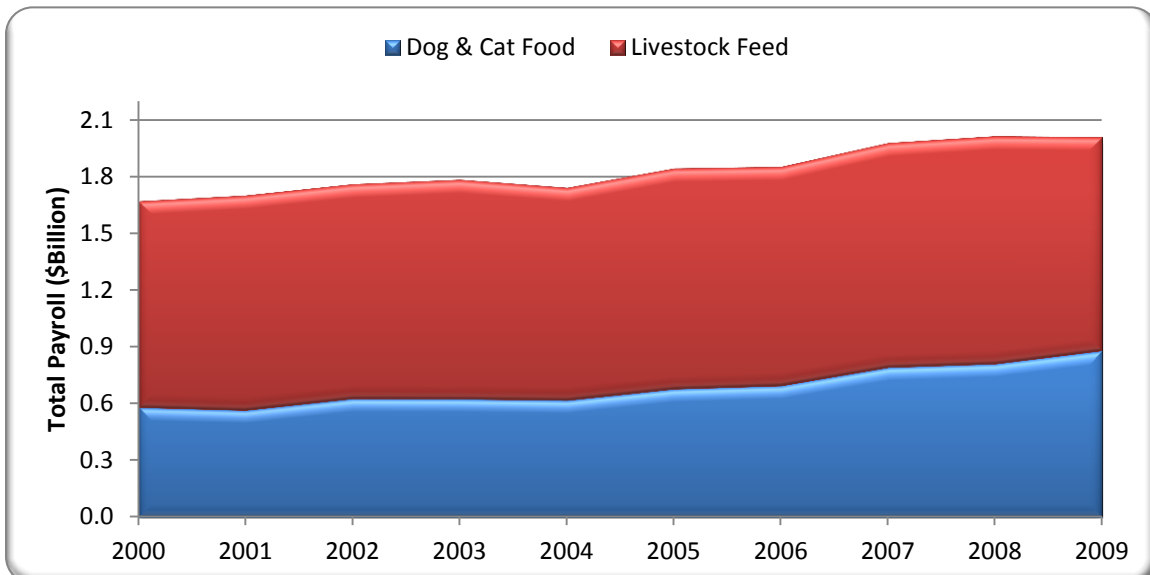
Figure 1 shows the livestock feed segment accounts for a larger share of the industry's total employment, peaking at 35,403 in 2001, but with an AAGR of -2.36%. Thus, over time, the industry is losing employment, possibly due to technical improvements and consolidations. Production workers average 61% of total livestock feed employees (standard deviation of 1.1%) over the period, with an AAGR of -1.92%. Losses during the recession were 0.34% for production workers compared to -3.8% for non-production workers. Thus, in the 2007 recession, the animal feed manufacturing industry shed more non-production workers than production workers.

PAYROLL

Total payroll is the sum of wages/salaries and fringe benefits. The animal feed manufacturing industry's payroll increased from about \$1.67 billion in 2000 to approximately \$2 billion in 2009, with an AAGR of 2.10% over the period. Likewise, fringe benefits increased from \$418 million to \$580 million between 2000 and 2009. The AAGR for fringe benefits was almost 4%, nearly double that of wages.

Total payroll in the dog and cat food segment trended up at an AAGR of 4.83% (Figure 2), increasing from about \$584 million to \$882 million. Its share of total industry payroll increased from 35% to 44% between 2000 and 2009, a result of the rapid increase in the segment's employees. Total payroll for the livestock feed segment peaked at \$1.18 billion in 2007 and has since dropped to about \$1.12 billion, but exhibited an AAGR of 0.77% over the period. Because of the growth in the dog and cat segment, livestock feed's share of total industry payroll declined from about 65% to 56% between 2000 and 2009. As a share of segment payroll, fringe benefits averaged 32% and 24% (standard deviation of 2%) in the dog and cat and in the livestock feed segments, respectively.

FIGURE 2: TREND IN LIVESTOCK FEED AND DOG AND CAT FOOD MANUFACTURING INDUSTRIES' PAYROLL



Source: Annual Survey of Manufacturers, Census Bureau (www.census.gov).

Average payroll per employee for the dog and cat food and livestock feed segments trended upwards between 2000 and 2009, growing at 2.8% and 3.0%, respectively. However, growth in the last five years for the livestock feed segment has been only 0.8%. Average payroll in the dog and cat food segment has been consistently higher than that of the livestock feed manufacturing industry and the difference has been increasing over time; e.g., the average payroll per employee for dog and cat food was about \$51,560 compared to \$40,593 in the livestock feed manufacturing industry in 2009 (27% higher) compared to a difference of 19% in 2005.

COST OF MATERIAL

Cost of material defines direct expenditure on inputs used in production during the year. It includes freight and fuel, electricity, parts and components, raw materials, contract work and

operating supplies. The AAGR for the animal feed manufacturing industry's total cost of material was 3.4%, increasing from \$16.4 billion in 2000 to \$31.7 billion in 2009. However, the AAGR between 2007 and 2009 was 10.3%, primarily because of commodity price increases that started in 2006.

Cost of material in the livestock feed segment jumped from \$13.7 billion in 2006 to about \$23.7 billion in 2008, a direct result of the aforementioned commodity price hike. Over the decade, the AAGR was 6.9% and 18.5% for the recession period. The livestock feed segment's share of total animal feed manufacturing industry cost of materials averaged about 73% (standard deviation of 2%), but the share has been declining, albeit slowly (AAGR of -0.5%). The dog and cat food segment's share of total cost of material has, thus, been growing, reaching about 31% by 2009. The cost of material AAGR for the dog and cat segment was 8.8% for the decade and 19% during the recession, indicating a more rapid growth than the livestock segment. This is emanating from the increasing quality and sophistication in the segment pushing ingredient and other material cost upwards.

VALUE OF PRODUCT SHIPMENTS AND VALUE ADDED

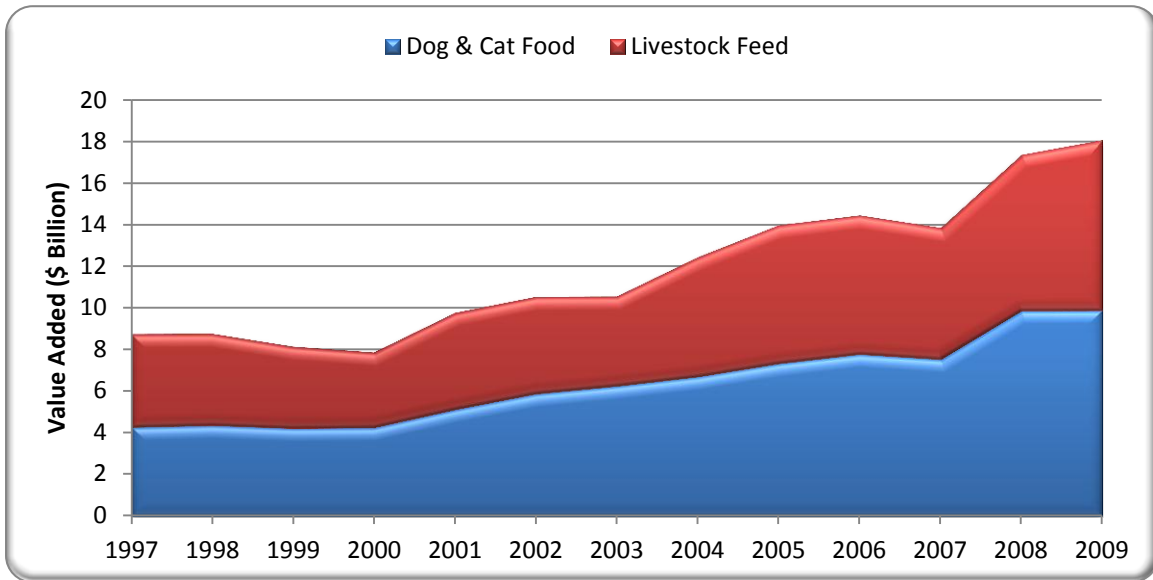
Value of product shipments captures the value of all products produced and shipped by all companies in the industry. Its AAGR for 2000-2009 was 5.1%, increasing from about \$24.2 billion to \$49.8 billion in 2009. The recession did not seem to have had any adverse effects on the industry, with value of shipments increasing by more than \$10 billion between 2007 and 2009. Value of shipments per employee in the animal feed manufacturing industry averaged \$740,169 (standard deviation of \$210,446) with an AAGR of 8.5% over the decade.

The dog and cat food segment accounts for an average of 37% of the total value of product shipment in the animal feed manufacturing industry (standard deviation of 2.5%). Its AAGR over the decade was 8.9% and 13.6% during the recession, increasing from approximately \$8.7 billion to \$19.7 billion between 2000 and 2009. This compares with the livestock feed segment's AAGR of about 7% over the period, increasing from about \$15.5 billion to about \$30.1 billion. The livestock feed segment's AAGR during the recession was 14.5%, stronger than was estimated for the dog and cat food segment.

Value added is the difference between value of product shipment and the cost of material. The animal feed manufacturing industry's value added increased from about \$7.9 billion in 2000 to about \$18.1 billion in 2009, with an AAGR of 5.1%. Growth during the recession declined to 3.8%. The value added per employee in the animal feed manufacturing industry increased from \$160,427 in 2000 to \$403,321 in 2009, with an AAGR of 9.7%.

The distribution and trend in the value added for the two animal feed manufacturing industry's segments are presented in Figure 3. The value added for the livestock feed manufacturing industry ranged from about \$3.6 billion in 2000 to \$8.2 billion in 2009, with an AAGR of 8.5%. This compared with an AAGR of 9.2% in the dog and cat food segment, with value added increasing from \$4.3 billion in 2000 and \$9.9 billion in 2009. The AAGR during the recession was also 9.2% but 7.5% for the livestock feed segment. The dog and cat food segment's share of total value added of the animal feed manufacturing averaged about 55% (standard deviation of 2%). The value added per employee in the livestock feed and dog and cat food segments averaged \$192,219 (standard deviation of \$61,917) and \$468,003 (standard deviation of \$95,532). Thus, employee performance in the dog and cat food segment was 2.4 times higher than in the livestock feed segment when measured by value added per employee.

FIGURE 3: VALUE ADDED (DOG AND CAT FOOD V. LIVESTOCK FEED MANUFACTURING)



Source: Annual Survey of Manufacturers, Census Bureau (www.census.gov).

CONCLUSION

Market conditions, especially the demand for companion animal foods, are driving the dog and cat food segment even as global demand for protein drives the dynamics in the livestock feed segment. Economic and demographic factors in the domestic market will drive the companion animal market as growing incomes in China, India and many developing countries continue to accentuate the livestock feed market. To sustain competitiveness, it is important for the U.S. industry to continue to make appropriate investments in technology and knowledge to grow value added per employee. This will contribute to its ability to fend off low cost competitors in the domestic market as well as in international markets that have traditionally been dominated by the U.S. The foregoing information should provide a foundation for the industry to build its domestic and global competitiveness strategies.