NEW EMERGING COMPETITORS – WHY ARE THEY A CONCERN?

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ABSTRACT

Pork production continues to evolve to fewer and larger operations that use innovative methods to improve vertical coordination. Established large firms appear to have some cost advantage over traditional producers, but face new competition from expansion in "new" hog regions in Central and Western Canada and Brazil. These two Western Hemisphere countries are rapidly growing pork production and exports. The technologies that allowed emerging large scale operations to displace existing traditional pork producers are easily adopted in new areas that have low feed cost, fewer neighbors, and fewer regulations.

INTRODUCTION

The pork industry has changed dramatically in the last 10 years and it is hard to tell who is a "new" competitor and the answer varies depending on who is asking. Many producers view large highly coordinated companies as new competitors. Or, they view packers that produce hogs as their new competition. Some Iowa producers still view North Carolina as a new competitor even though they haven't added a sow since 1996. Many in the US would view Canada as a new kid on the block. Yet others look to Brazil as the next new pork powerhouse as it expands pork production, processing and grows exports from a region that is FMD free. And, finally, some producers look at other proteins, beef, poultry, plant sources, as the competition. This paper will briefly review several of these competitors and try to offer some insight to their competitiveness in the future.

GLOBAL PORK PRODUCTION AND TRADE

Let's first look at global pork production and pork trade to determine who the players are and how they have changed in recent years. China remains the world leader in pork production (Table 1) with approximately half of the estimated world production. China is still expanding production at a double digit pace, although slower than its growth a decade ago. The next largest producer is the 15-country block of the EU where 21 percent of world production occurs. However, growth in the EU has dropped to 2 percent from 1998-2002 due in part to environmental and animal disease pressures. The third largest producer is the United States with 10 percent of global production and 4 percent growth over the last 5 years. Note that global pork production has increased over the past 5 years. Production in 2002 was 8 percent higher than 1998. These three regions (China, EU, and US) account for 81 percent of world pork production and 80 percent of the increase since 1998. China alone accounted for two-thirds of the increase in global pork production.

Table 1. World Pork Production, 1,000 Metric Tons Carcass Weight Equivalent.

	1998	1999	2000	2001	2002p	2003f	World Share 02	Growth 98-02
China	38,837	40,056	40,314	41,845	43,000	44,100	50%	11%
EU	17,392	18,059	17,585	17,419	17,800	17,820	21%	2%
United States	8,623	8,758	8,597	8,691	8,973	8,819	10%	4%
Brazil	1,690	1,835	2,010	2,230	2,356	2,430	3%	39%
Canada	1,337	1,550	1,638	1,729	1,830	1,865	2%	37%
Rusn Fed	1,510	1,490	1,500	1,560	1,600	1,700	2%	6%
Poland	1,650	1,675	1,620	1,547	1,585	1,640	2%	-4%
S Korea	992	950	1,004	1,077	1,161	1,200	1%	17%
Japan	1,285	1,277	1,269	1,245	1,200	1,190	1%	-7%
Philippines	933	973	1,008	1,064	1,095	1,120	1%	17%
Mexico	950	994	1,035	1,065	1,085	1,100	1%	14%
Others	4,129	4,128	3,806	3,683	3,780	3,790	4%	-8%
Total	79,328	81,745	81,386	83,155	85,465	86,774	100%	8%

Source: USDA-FAS, p=preliminary, f= forecast

Brazil and Canada are the two fastest growing countries for pork production, up 39 and 37 percent, respectively over five years ago. They are also comparable in size to one another and to the Russian Federation and Poland. The two eastern European countries posted steady to lower production numbers. Countries with approximately 1 percent of world production include South Korea, Mexico, and the Philippines that are growing at a 14-17 percent rate. Japan and the remaining countries of the world collectively are reducing pork production.

Pork exports in 2002 were 37 percent higher than 1998 as pork production increased in some regions and declined in others (Table 2). The EU has the largest exports with over one-third of the total and 2002 exports were 29 percent higher than 5 years earlier. Canada is the world's second largest exporter, surpassing the US in 2000 and growing 85 percent over 5 years. The US grew 27 percent and is the third largest exporter. These three regions account for nearly three-fourths of global pork exports. Brazil and Australia are the fastest growing exporters during the period, but Brazil is a much larger player, accounting for 10 percent of total pork exports.

The EU and Canada are the largest net exporters, exports - imports (Table 3). However, Canada is more dependent on trade as its net exports are equal to 38 percent total production compared to 7 percent for the EU, 3 percent for the US, and 17 percent for Brazil. Net importing countries, those that import more than they export include, Japan, the Russian Federation, South Korea, and Mexico. For example, imports to Japan were 94 percent as large as domestic production meaning that nearly half of the pork consumed was imported.

Japan is the largest pork importer and it is a growing market (Table 4). Mexico and South Korea are smaller but rapidly growing pork importers. The five-year growth in Japan alone is larger than the entire market in Mexico, but Mexico is growing faster. While the US has transportation advantages to Mexico, it would appear that Canada and the US are well

positioned for exports to Japan, South Korea, Hong Kong, and China. Canada also has an advantage over others when trading with the US.

Table 2. World Pork Exports, 1,000 Metric Tons Carcass Weight Equivalent.

	1998	1999	2000	2001	2002p	2003f	World Share 02	Growth 98-02
EU	1,004	1,390	1,470	1,235	1300	1,325	34%	29%
Canada	432	554	658	727	800	815	21%	85%
United States	558	580	584	708	709	726	19%	27%
Brazil	105	109	163	337	400	430	10%	281%
China	143	75	73	139	225	200	6%	57%
Hungary	109	131	143	118	120	110	3%	10%
Poland	220	235	160	100	80	85	2%	-64%
Australia	17	37	49	66	79	83	2%	365%
Mexico	49	53	59	61	60	60	2%	22%
Czech Rep	27	10	8	14	27	25	1%	0%
Korea	116	113	30	42	20	55	1%	-83%
Others	20	23	14	5	5	7	0%	-75%
Total	2,800	3,310	3,411	3,552	3825	3,921	100%	37%

Source: USDA-FAS, p=preliminary, f= forecast

Table 3. Pork Net Exports and Share of Production, 2002.

	Net Exports	Net Export/Prod
China	165	0%
EU	1,240	7%
United States	230	3%
Brazil	400	17%
Canada	700	38%
Rusn Fed	-700	-44%
Poland	30	2%
S Korea	-125	-11%
Japan	-1,125	-94%
Philippines	-10	-1%
Mexico	-240	-22%

NEW COMPETITION

Feed costs remain the major determinant to long term profitability. The Midwest US and the Prairie Providences of Canada are comparable in total cost of production with a slight feed cost of gain advantage to Canada (Martin and Kruja, 2000 and Brewer *et al.*, 1998). However, Brazil may have lower cost than either North American country.

Table 4. World Pork Imports, 1,000 Metric Tons Carcass Weight Equivalent.

	1998	1999	2000	2001	2002p	2003f	Growth 98-02
Japan	777	919	995	1,068	1,125	1,150	45%
Rusn Fed	710	832	520	560	700	710	-1%
United States	320	375	439	431	479	490	50%
Mexico	144	190	276	294	300	310	108%
Hong Kong	207	217	247	260	285	300	38%
S. Korea	66	156	174	123	145	150	120%
Canada	64	65	68	91	100	105	56%
China	46	43	50	58	60	70	30%
EU	40	54	54	55	60	60	50%
Romania	53	27	29	46	55	55	4%
Poland	74	55	47	23	50	50	-32%
Others	160	227	223	188	194	202	21%
Total	2,661	3,160	3,122	3,197	3,553	3,652	34%
Source: USDA-FAS, p=preliminary, f= forecast							

Brazil has captured the attention of many US producers in part due to its vast grain production potential and now because of its increasing pork production. A delegation from the Iowa Pork Producers Association (IPPA) visited Brazil. (Iowa Producers Study Agriculture in Brazil - http://www.iowapork.org/export/brazil.html)

> One farm they visited was a Brazilian joint venture in Mato Grasso that currently has 12,200 sows. The company's goal is to expand to 18,000 sows by the end of the year and is projecting to reach 55,400 sows in 2005. The company's plan is to develop production pods of 10,000-plus sows with three-site production at each pod. The IPPA delegation concluded that many costs including land, labor, facilities and energy are much less expensive in Mato Grasso. The challenges faced include the country's infrastructure, instability of the currency exchange rate and increasing the domestic market. Company officials stated the farm in Mato Grasso is 1000 hectares (2,470 acres). The site provides excellent bio-security, has a natural barrier of a forest preserve, has a good supply of water, and the manure can be utilized on nearby farmland. Market hogs are transported 700 miles, with the trip lasting approximately 22 hours one-way. The company's management is focused on pork production and may consider processing at some time in the future. Currently, feed is prepared on a custom basis by a feed mill in the area and plans include the construction of a feed mill.

Given Brazil's large base of low cost land it is expected that its pork production will increase. Much of the increase will feed the domestic market, but exports are also expected to continue growing. Currently most of its exports are as frozen split carcasses to Russia, but it will likely try to expand into other markets.

LARGE SCALE PRODUCERS

The US pork industry as well as that of other countries is becoming dominated by large firms. Glenn Grimes and James Rhodes began studying the structure of the US pork industry in 1974 when the "Large Producer" was defined as marketing 5000 hogs per year. Grimes has continued to survey producers in approximately three year intervals to monitor changes in the US pork sector. The most recent survey was based on calendar year 2000 (Lawrence and Grimes, 2001). The 20 largest firms were estimated to have marketed 33.3 million hogs in 2000, nearly 35 percent of total U.S. marketings. Combined with the 136 operations in the 50,000-500,000 category, these 156 firms produced slightly more than half (51%) of all hogs in 2000. The share raised on large farms (50,000 head or more) has increased since 1997, when the 145 largest firms produced 37 percent of the hogs and the 5,000 and more hog class had 63 percent of the total.

It should be noted that at least 25 of the 136 operations in the 50-500,000 head category are producer networks owned by multiple individual farmers who finish the feeder pigs produced in centralized sow units. Each network produced and marketed more than 50,000 hogs a year, but may have been comprised of a dozen or more owners who finished the hogs on their own farms. A network is counted as a single operation in the survey because a single firm manages the sow unit and members of the network typically are under a common marketing contract.

The trend to fewer and larger hog operations is not new. Larger producers continue to gain market share, while smaller producers lose market share. Table 5 shows the change in market share since 1988 when the less than 1,000 head producers marketed nearly one-third of all U.S. hogs. This figure has declined to approximately 2 percent in 2000. The 50,000 head and larger category increased from 7 percent to over 50 percent. The 5-10 thousand group has maintained a stable market share over the 12-year period, and is the dividing line between those gaining and those losing market share.

Table 5. Share of annual hog marketings by size category, 1988-2000 (%).

1,000 hd.	1988	1991	1994	1997	2000
<1	32	23	17	5	2
1-2	19	20	17	12	7
2-3	11	13	12	10	5
3-5	10	12	12	10	7
5-10	9	10	12	10	10
10-50	12	13	13	16	18
50+	7	9	17	37	51

Source: Lawrence and Grimes, 2001

Since 1994 the 50,000+ category was divided into categories of 50-500 thousand head and those with more than 500,000 head. Both size categories increased in number of operations and market share (Table 6). Firms marketing 50-500 thousand increased from 57 to 136

operations and went from 7 to 17 percent market share. The more than 500,000 head firms increased from 9 to 20 operations and from 10 to 35 percent of market volume.

Table 6. Number and market share by large firms, 1994-2000.

	1994	1997	2000	1994	1997	2000
1,000 hd.	Number of firms			Percent of marketings		
50-500	57	127	136	7	13	17
500+	9	18	20	10	24	35

When surveyed most producers planned to grow in the future, but regardless of intentions, plans are not always followed. Table 7 compares the projections for growth by size category based on the 1997 survey with the actual change in marketings from 1997 to 2000. Notice that the less than 5,000 head groups planned expansion of 6 to 15 percent by 2000, but actual marketings decreased 20 to 27 percent. The 5,000 and larger categories also trimmed their growth plans from the 1997 projection, but still posted growth. The 10-50 thousand class was within 2 percentage points of expected growth, and the more than 50,000 category exceeded planned growth by 7 percentage points. However, some of the growth in the larger categories can be attributed to adding more operations that grew into the larger size class.

Table 7. Projected growth reported in 1997 and actual growth in 2000 by size group (%).

Marketings 1,000 hd.	Planned	Actual
1-2	+10	-22
2-3	+6	-27
3-5	+15	-20
5-10	+25	+13
10-50	+39	+37
50 and up	+41	+48

One true measure of competition is cost of production. While modern producers know their cost of production, how they calculate it can differ widely. The survey simply asks how they faired in 2000. Sixty-five to 95 percent of the firms reported a profit in 2000 and another 5 to 24 percent said they were breakeven. Note that profitability was more probable for larger producers but there was relatively little difference between 2-3 thousand and 10-50 thousand head marketed (Table 8).

Another test of competitiveness is "staying power". Producers were posed a hypothetical question about cost of production by asking producers what live hog price they would need to stay in business until 2003 if central Iowa corn price was $2.50/bu. Table 9 shows the distribution of responses. First, note that the group planning the fastest growth (50-500) had the fewest percent of operations that could produce for $34-36/cwt. However, most of these firms had only slightly higher costs—52 percent would stay in business at $39. Second, even

at higher prices above $48, there were still producers who would quit the business. In fact, 7 percent of the marketings in the 1-2 group will exit by 2003 regardless of price.

Table 8. What were the financial results for producers by size category for the year 2000 (%)?

	Net Profit	Breakeven	Net Loss
1-2	65	24	11
2-3	77	15	8
3-5	79	16	5
5-10	78	13	9
10-50	77	12	11
50-500	90	5	5
500+	95	5	0

Table 9. Willingness to stay in production until 2003 by size group at each hog price if central Iowa corn price was $2.50/bu. (%).

Size class	Percent of 2000 marketings				
1,000 hd.	$36	$39	$42	$45	$48
1-2	19	43	72	89	93
2-3	22	44	71	86	98
3-5	16	37	70	91	94
5-10	17	42	78	95	99
10-50	23	52	77	93	97
50-500	4	51	86	97	98
500+	34	53	89	93	100

In rough numbers, a dime change in corn price relates to about $.50/cwt in cost of production. Currently we are closer to $2.00/bu for corn than $2.50. The $.50 lower corn price would reduce the stay-in price by approximately $2.50/cwt. Considering the cost structure of large farms and recent prices it is not surprising that the large producers are satisfied with the pork business.

The large producers are also more likely to use "non-traditional" business structures. Over two-thirds of hogs marketed by the 50,000 head or more producers were finished in contract facilities. Nearly 90 percent of their marketings are sold under contract or owned by a packer. These producers expressed a high level of satisfaction with hog production, they and contract growers were satisfied with production contracts, and the producers were satisfied with their marketing contracts and planned to continue them in the future. These 50,000 head or more producers planned to grow their business, but many noted their plan growth would be through acquisition of existing facilities. Limits to their growth included lack of profitability and, to a lesser extent, environmental regulations.

The less than 50,000 head a year producer is also planning growth over the next 3 years, but to date has been losing market share. The less than 5,000 head producers in particular have

declined in number and production. Smaller producers were also less likely to use production or marketing contracts, AI, or sell on a carcass basis. However, because the smaller producers relied more heavily on the cash market, they are also more actively involved in price discovery for many of the contracts used by other producers.

CONCLUSIONS

The new competitions to traditional pork producing regions are a concern to existing producers because they have changed the rules of the game by finding and exploiting advantages. In the case of Brazil and the Prairies of Canada the advantage is low costs of grain, less dense populations, and a growing export market for pork. They are also building new systems that efficiently incorporate technologies and transportation efficiencies. The large producers of the US are exploiting many of the same factors. They developed efficient systems without the limitation of an existing farm. They can chose where to produce hogs and put sows in areas that allow for large facilities and have cheaper labor and put finishing near large grain supplies and packer demand. They also wrote a new set of business rules regarding contracts, relationships, and leverage rather than ownership, family labor, and equity. These new competitors, regardless of their location represent the new pork industry that has a global market focus and is quality and efficiency driven. Successful exiting producers will learn to play by the new rules, or find new markets that are outside the commodity pork mainstream dominated by the new competitors.

LITERATURE CITED

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