

China's Meat Revolution: Agribusiness, Growth and Its Limits

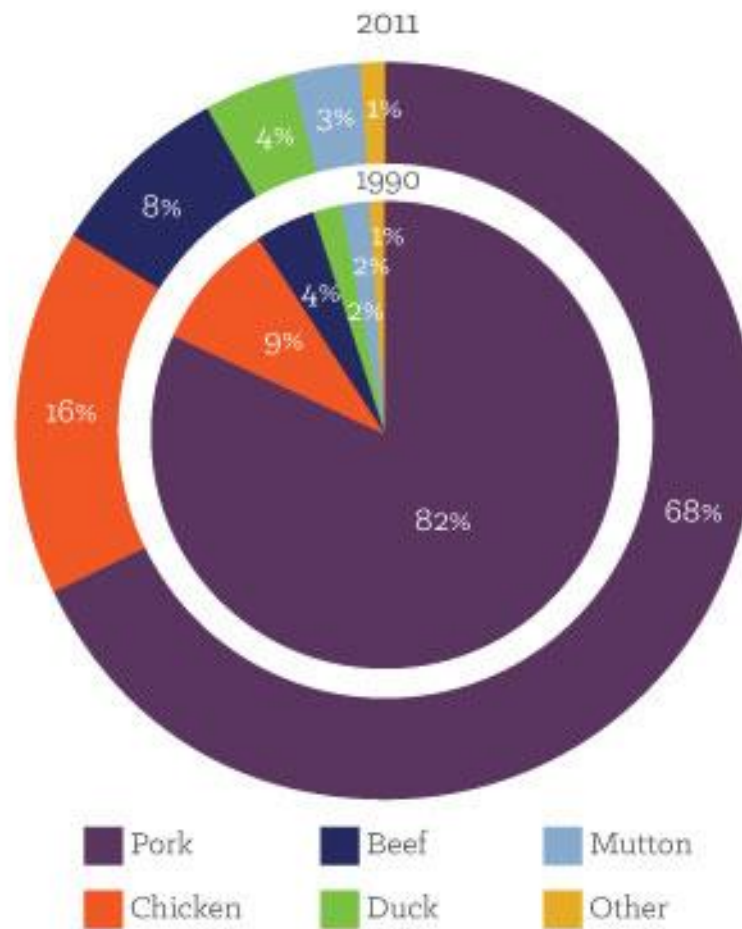
Shefali Sharma

February 19, 2014





Figure 1: Change of China's meat production structure from 1990 to 2011



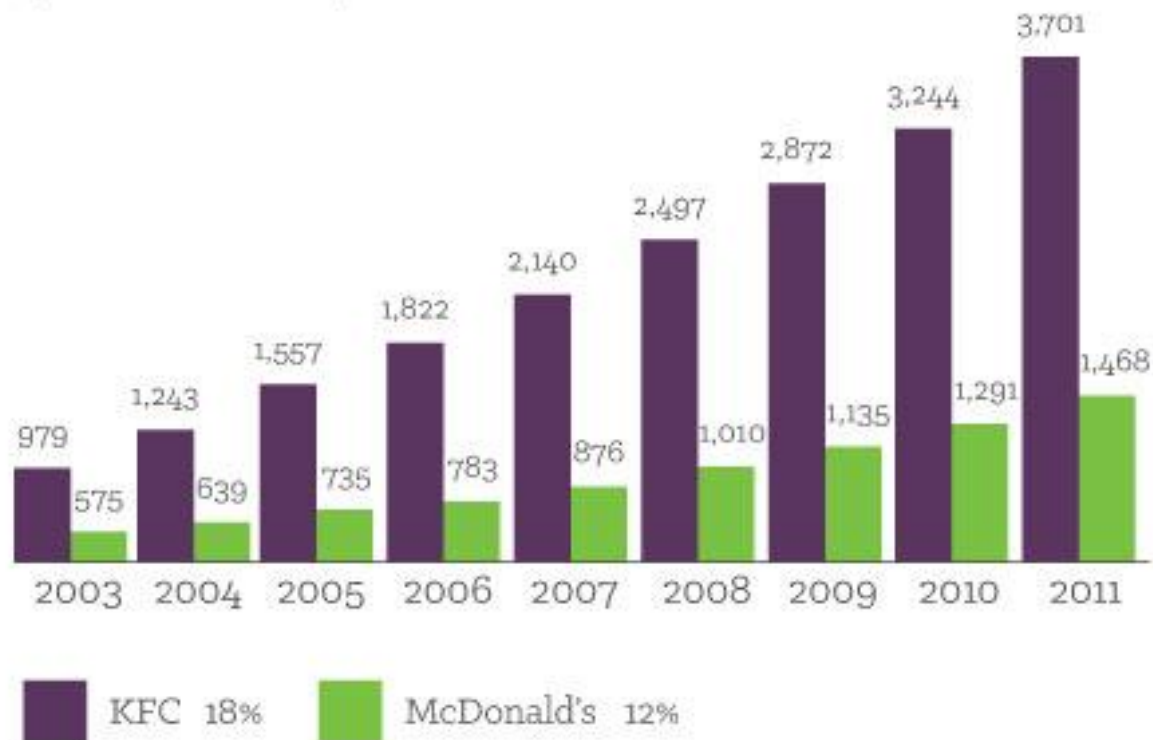
Translated in English from: 陈志坚, 圣农发展深度报告: 量增价升, 盈利周期反转(武汉: 长江证券, 2013), 6

Figure 9: Retail prices of pork and poultry in China, 2000–2012



Source: Chenjun Pan, *Can China's Poultry Move Out of Pork's Shadow? Still on the Road to Industrialization*, (Utrecht: Rabobank, 2013), 4.

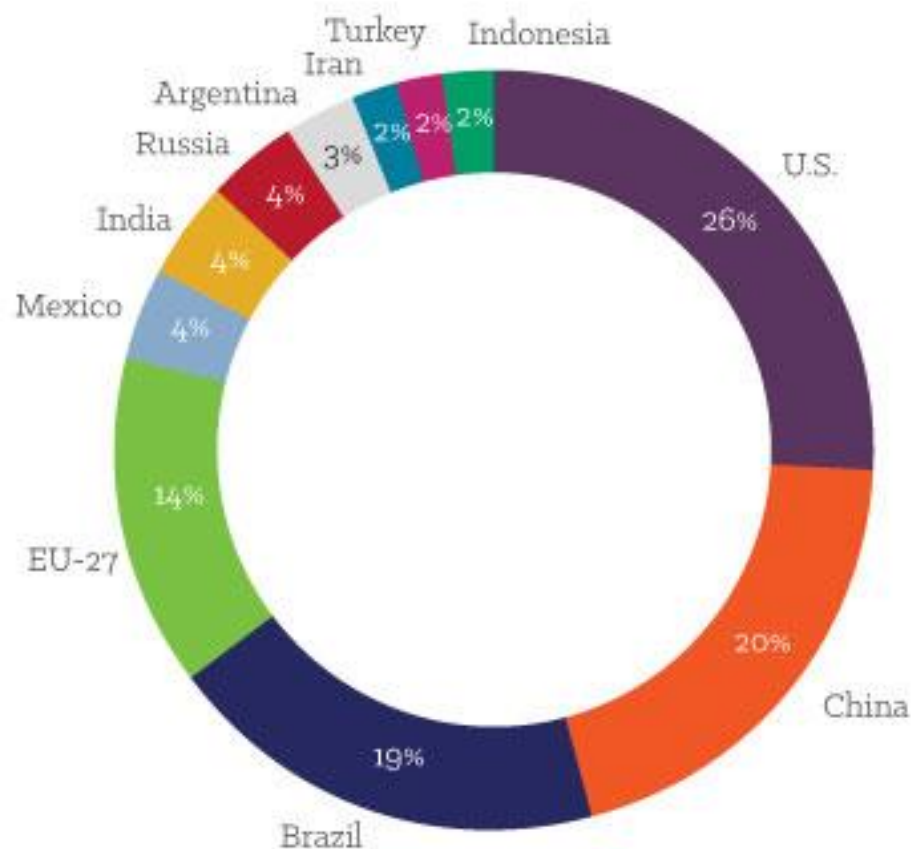
Figure 10: Recent growth of global food service chains in China (number of stores)



Source: Marfrig Group, *Institutional Presentation July 2013* (Sao Paulo: Marfrig Group, 2013), 15.

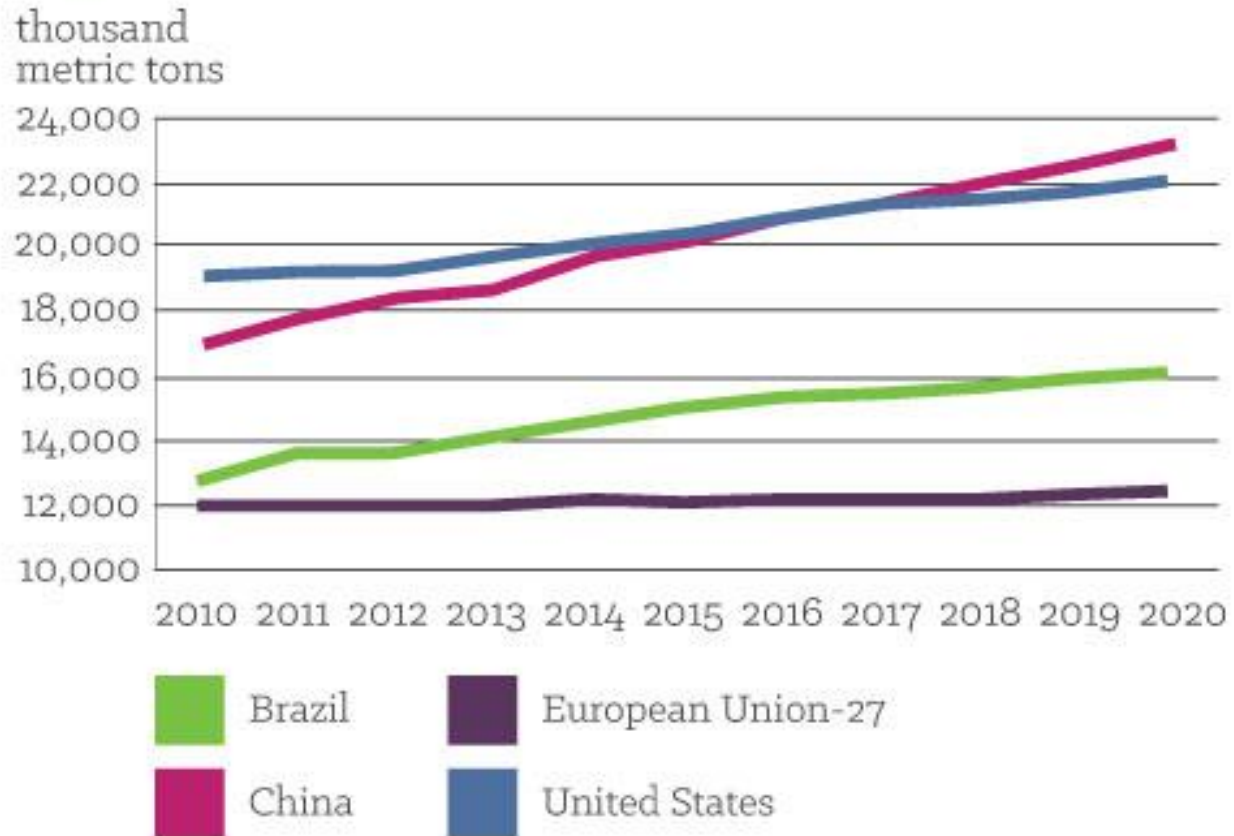
Figure 4: Major broiler producers and their share of total production

The total in this chart is the total broiler production of these 11 world's largest producers, not world broiler production.



Source: 王燕明, "2011年全球肉鸡产业发展形式及2012年预测," 中国畜牧杂志48 (2012) : 37 .

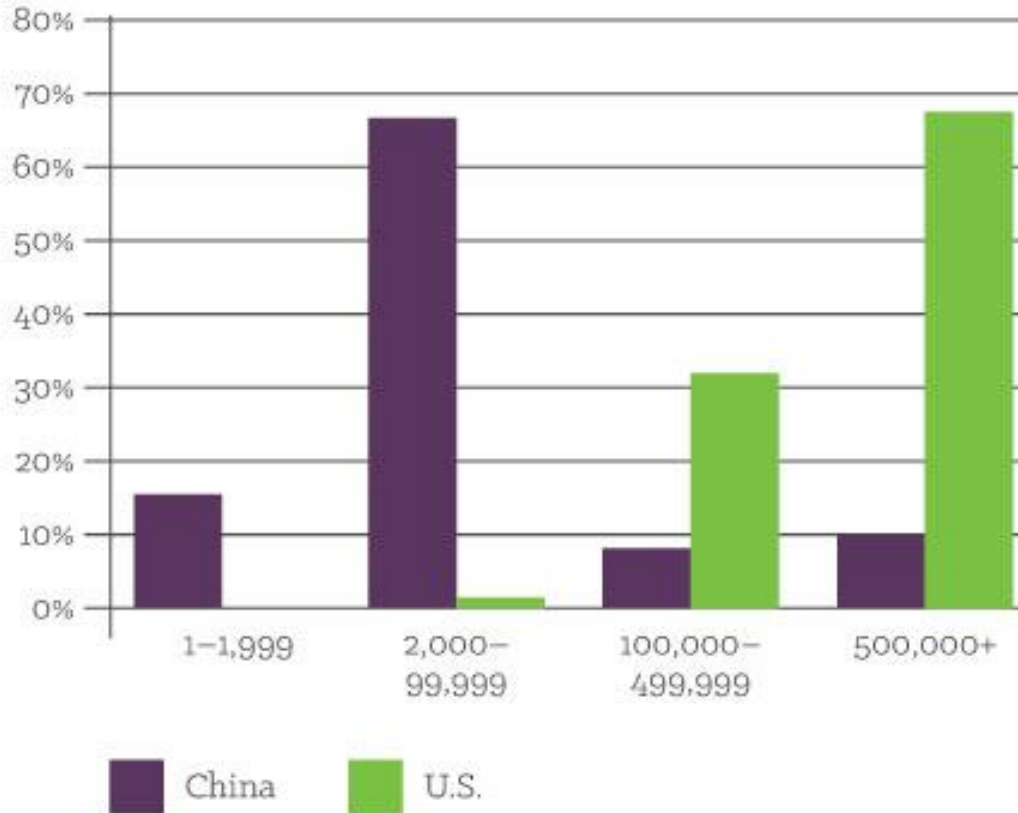
Figure 7: Poultry meat production, select countries



Source: USDA, *International Egg and Poultry Review* January 29 2013
(Washington: USDA, 2013), 1.



Figure 20: Share of poultry production farms with different scales in total poultry output in China and the U.S.



Source: 陈振志，全球肉鸡产业经营模式之演进与比较(上海：东方证券，2013)，18。

Figure 19: Changes in aggregate annual output of broiler farms by farm size in China.

AGGREGATE ANNUAL OUTPUT (NUMBER OF BIRDS) OF BROILER FARMS BY FARM SIZE (MEASURED BY NUMBER OF BIRDS SOLD EACH YEAR)	1998 (IN MILLIONS)	1998 PERCENTAGE OF TOTAL OUTPUT IN CHINA	2000 (IN MILLIONS)	2000 PERCENTAGE OF TOTAL OUTPUT IN CHINA	2005 (IN MILLIONS)	2005 PERCENTAGE OF TOTAL OUTPUT IN CHINA	2009 (IN MILLIONS)	2009 PERCENTAGE OF TOTAL OUTPUT IN CHINA
1-1,999	4,238.50	61.93%	5260.1	64.95%	4929.1	52.27%	3195.5	30.12%
2,000-9,999	1,413.70	20.66%	1482.7	18.31%	1751.1	18.57%	1792.1	16.89%
10,000-49,999	671.5	9.81%	817.6	10.10%	1687.3	17.89%	3095	29.17%
50,000-99,999	174.8	2.55%	208.1	2.57%	386.3	4.10%	953.4	8.99%
100,000-499,999	132.1	1.93%	139.3	1.72%	322.5	3.42%	679.8	6.41%
500,000-999,999	80.5	1.18%	63.7	0.79%	119.1	1.26%	235.1	2.22%
1 million or more	132.7	1.94%	127.1	1.57%	235.5	2.50%	658.6	6.21%
Total production from intensive farms (with an annual output larger than 2,000 birds)	2,605.30	38.07%	2838.5	35.05%	4501.8	47.73%	7414	69.88%
Total	6843.8	100.00%	8098.6	100.00%	9430.9	100.00%	10609.5	100.00%

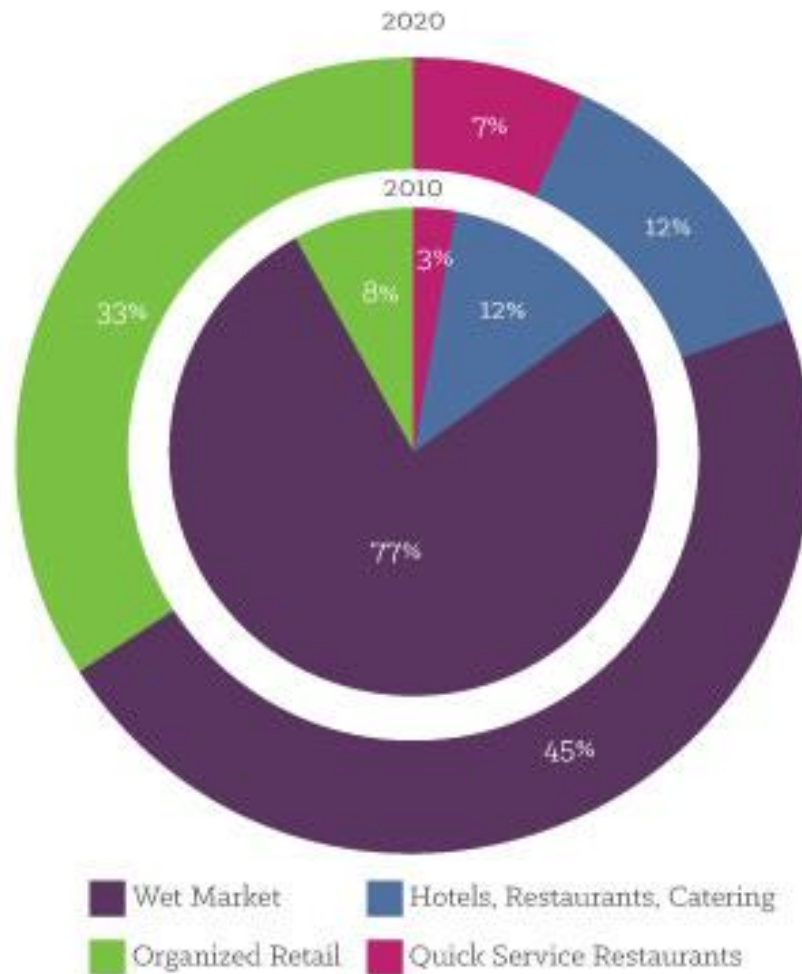
Source: 刘春芳, 王济民, “中国肉鸡产业发展历程及趋势,” 农业生产展望8 (2011): 38.







Figure 11: How poultry products are distributed in China in 2010 and 2020 (forecast)



Source: ANZ, Feeding the dragon: The modernisation of China's food industry. (Melbourne: ANZ, 2013), 9.

Role of Transnationals

- Tyson's Cobb Vantress (80% of grandparent breeders)
- Erich Wesjohan (German) and Hendrix Genetics (Dutch) layer hen breeds
- Tyson
- Marfrig's Keystone Foods
- Illinois-based OSI Group
- Cargill
- Brasil Foods
- Perdue
- Goldman Sachs

I have a dream and my dream is that each Chinese person, especially the children, can afford to buy one jin [500g] of milk to drink every day.

–Premier Wen Jiabao, 2006

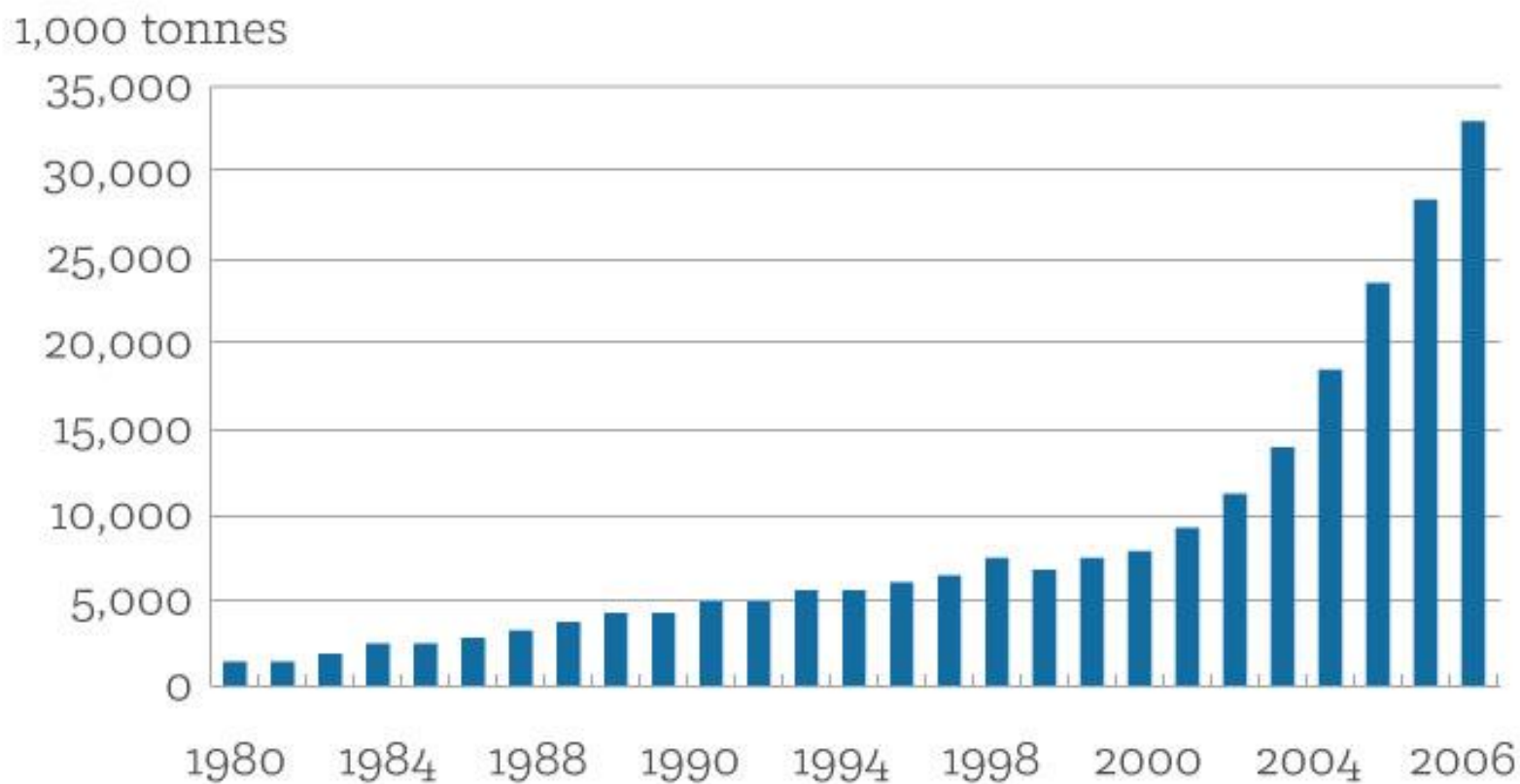


Figure 2: Number of dairy products sold in retail stores in Beijing, February 2006

SUPERMARKET	TOTAL PRODUCTS VARIETIES	VARIETIES OF DAIRY PRODUCTS
Carrefour	22,000	181
Wal-Mart	20,000	272
Lotus	18,000	127
Chengxiangcangchu	5,100	190
Chaoshifa, Shuanggan Store	3,000	179
Champion	4,500	126
Chaoshifa, Shuangyushu Store	6,000	182
Chaoshifa, Nongkeyuan Store	4,200	126
Xidan	4,200	124
Source: Hu 2009, pg. 31		

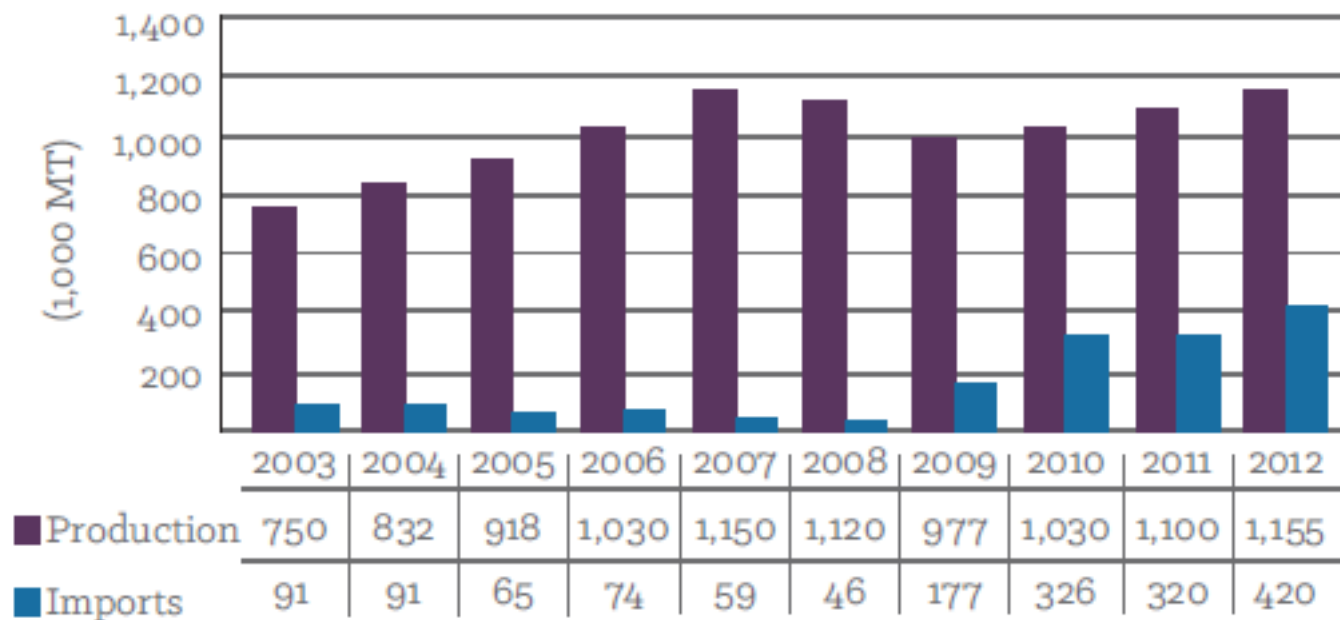


Figure 1: Milk output in China, 1980–2006



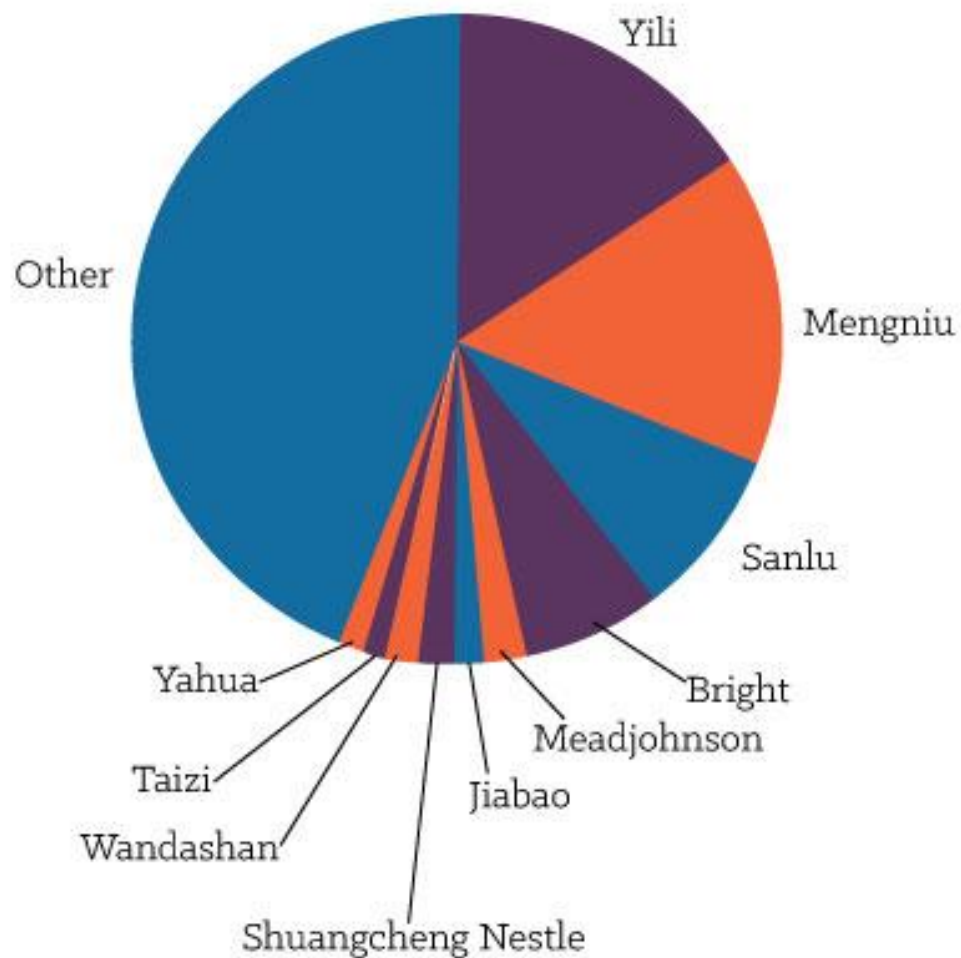
Source: Chinese statistical yearbook
Reproduced from Hu 2009

Figure 8: China's Whole Milk Powder Production and Imports 2003–2012



Reproduced from Ryan Scott and Jianping Zhang, GAIN Report: China-Dairy and Products Annual Report (Washington, D.C.: USDA FAS, 2012).

Figure 4: Market share of Chinese dairy companies, 2006



Reproduced from Gale et al. (2009), pg 16.

Figure 5: Number of Chinese Dairy Farms at Different Herd Sizes (2007–2010)

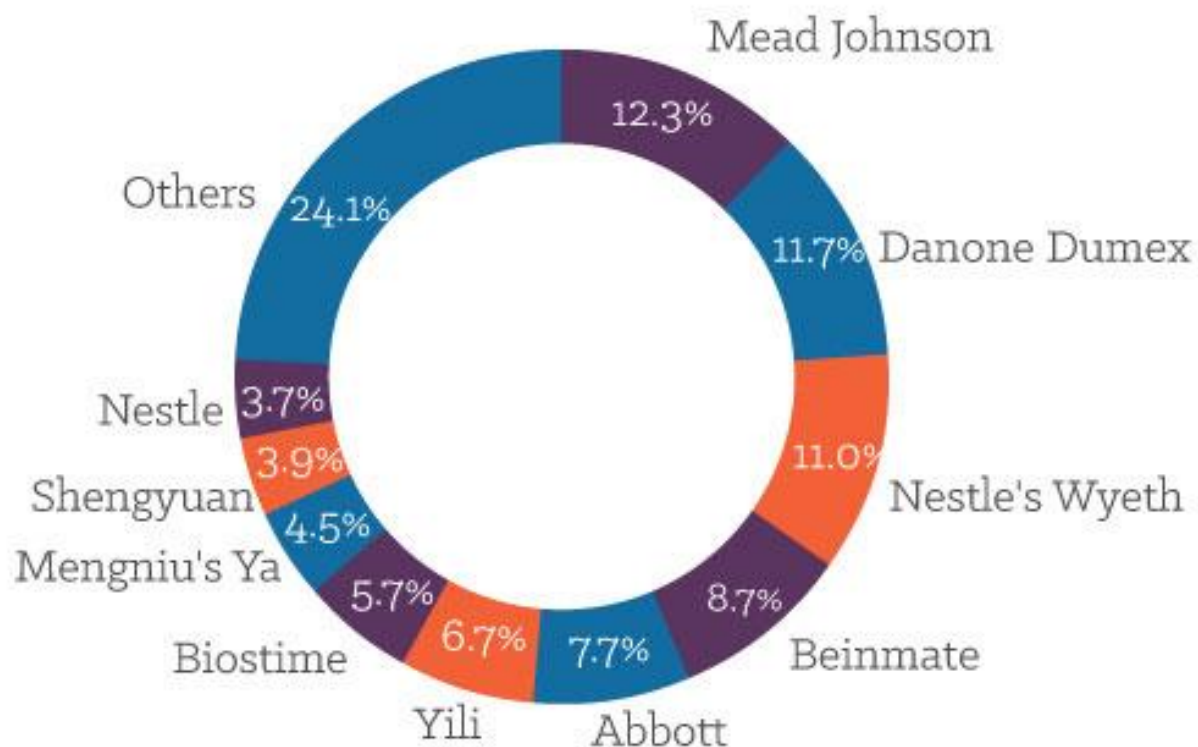
	2007	2008	2009	2010	% CHANGE 09/08	% CHANGE 10/09
ANNUAL INVENTORY (HEAD)	FARMS	FARMS	FARMS	FARMS	FARMS	FARMS
1–4	2,159,701	1,970,755	1,816,359	1,750,895	-7.32	-3.60
5–9	295,789	398,744	374,541	345,667	-6.07	-7.70
10–19	149,106	143,358	138,265	138,246	-3.55	0.00
20–49	42,079	51,804	49,490	49,450	-4.47	-0.10
50–99	14,175	13,842	13,685	14,758	-1.13	7.80
100–199	4,421	4,425	4,324	4,640	-2.28	7.30
200–499	2,336	2,679	3,341	3,579	24.71	7.10
500–999	768	1,026	1,773	2,061	72.81	16.20
1,000 and above	339	454	706	898	55.51	27.20

Reproduced from FAS 2012 Semi-Annual (P6) and 2011 Annual (P3)





Figure 9: Infant formula market share⁷²

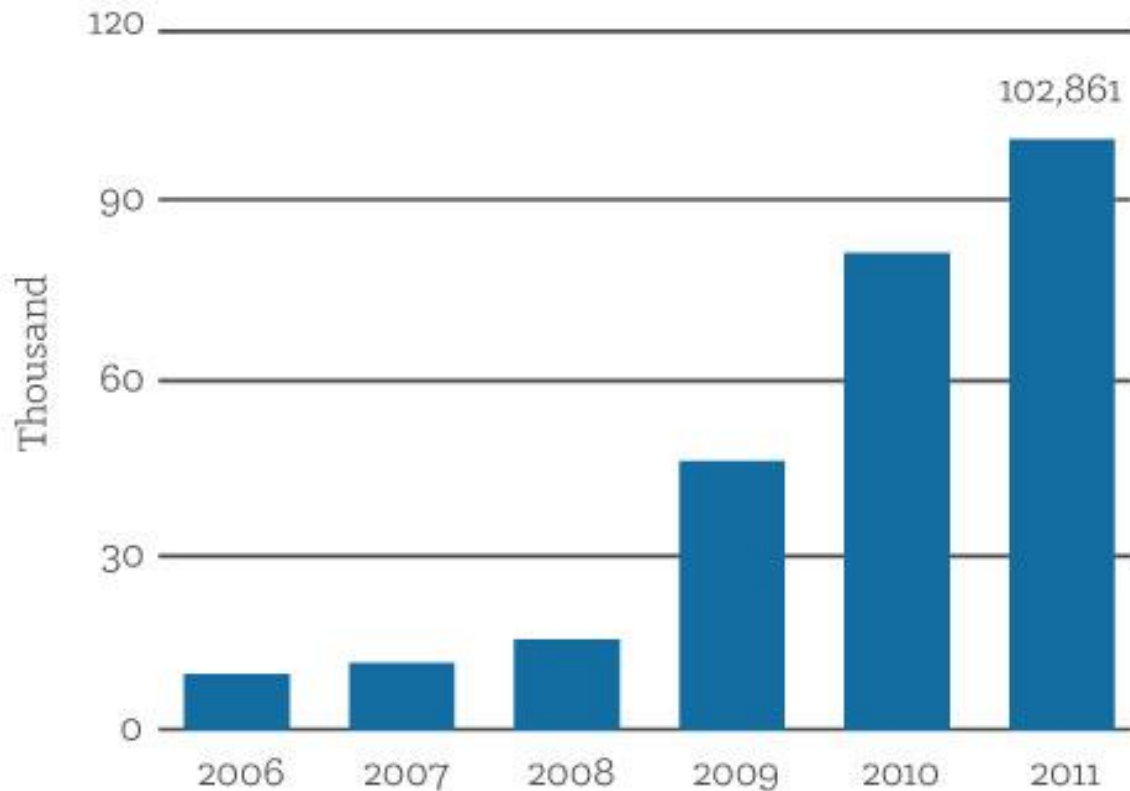


Source: <http://www.bjnews.com.cn/finance/2013/06/19/268973.html>

Other Developments

Figure 10: STAMPEDE

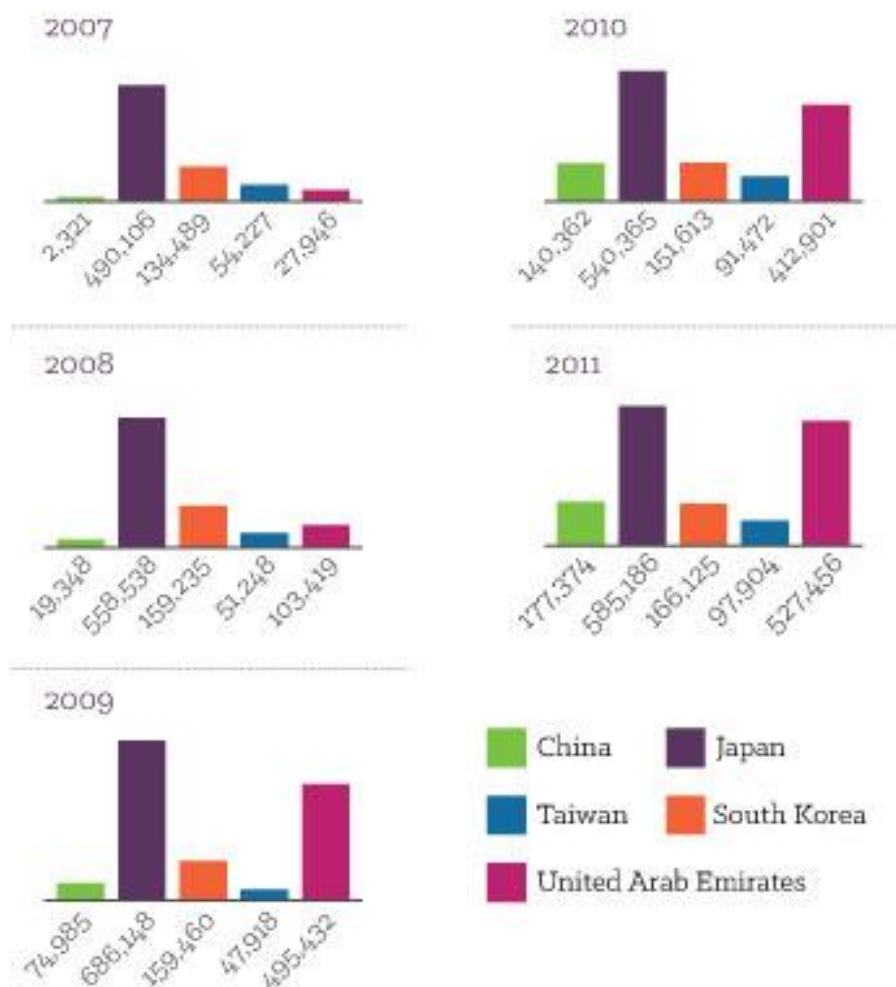
China has ramped up the number of live dairy cows it imports to boost production and improve quality



Reproduced from <http://online.wsj.com/article/SB10001424052702303863404577281302732745814.html>



Figure 11: U.S. Alfalfa Hay Exports
(in metric tons)



Source: http://www.agweb.com/article/alfalfa_exports_surge/

Has China reached “peak” meat
and dairy?



Superbug
MRSA
MILITIA

STAPH
YOU

I'd
rather
have
TB

Fungus
among
us

Got
infections

Don't
staph
me
bro!
INFECTIONS
'R'
US

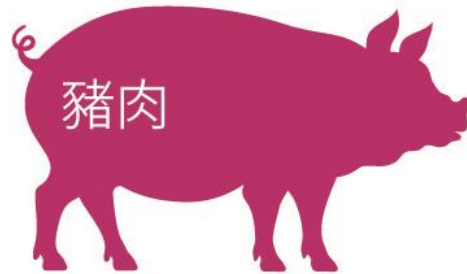
STAPH

Antibiotic overuse in China's livestock industry

- In 2008, China produced **210 million kgs** of antibiotics.
- Half of which was used in livestock production
- The US uses 29 million pounds of antibiotics (**13.2 million kgs**)

So if the problem of antibiotic resistance is a crisis in the U.S....

What does it mean for China?



Global Meat Complex: The China Series

China's Pork Miracle?

Agribusiness and Development
in China's Pork Industry



Global Meat Complex: The China Series

Fair or Fowl?

Industrialization of Poultry
Production in China



Global Meat Complex: The China Series

China's Dairy Dilemma

The Evolution and Future Trends
of China's Dairy Industry



Global Meat Complex: The China Series

The Need for Feed

China's Demand for Industrialized
Meat and Its Impacts

IATP's China Series Webinars

Final Webinar:

From Melamine to Dead Pigs to Bird Flu:

Can Food Safety Become a Game Changer Against Industrializing Meat Production in China?

Tuesday, February 25, 10:00 a.m. CST

To learn more, register for future webinars and download
The China Series reports, visit:

www.iatp.org/industrial-meat