

# Overview on global meat production at World Nutrition Forum

At the recent Biomin World Nutrition Forum in Salzburg, Austria, financial consultant, Gordon Butland, gave a comprehensive overview of the livestock industry.

He commenced by giving an intriguing insight into the current rise in corn price. Currently we process 150 million broilers a day which means that there are some 6,000 million on the ground and, on average, each broiler eats 100g of feed a day containing 60g of corn. This means that 360,000kg of corn is consumed every day by poultry.

On 29th June this corn cost \$US46 million at Chicago prices. On 12th October this cost was \$86 million – an increase of \$36 million per day! This figure is just for broilers and just for corn so we can add to this other species and do a similar calculation for soya which has also risen in price.

## Food inflation

Gordon highlighted that the French poultry industry had recently informed the supermarkets that it needed a 15% price increase and Wal Mart had forecast that food inflation would be significant in 2011.

Current animal protein production figures (Table 1) shows the significant growth that has occurred over the last 20 years. In terms of percentage growth this equates to 42% for broiler meat, 15% for pork and 22% for eggs. If we look at this more specifically pork consumption in China is expected to increase by more than 3% and broiler consumption in Brazil by 4% this year. Broiler consumption in the USA is expected to rise by <1% this year.

**Table 1. Global meat and egg production 1989-2008 (million tonnes).**

	1989	1999	2008
Pork	68	89	103
Broiler	34	56	79
Beef	54	59	66
Other poultry (exc. ducks)	5	9	12
Sheep	7	7	8
Other meat	6	8	11
Eggs	34	50	61
Total	208	278	340

Meat	Change in value (%)	Change in volume (%)	Increase in price year on year (%)
Chicken	8	5	3
Beef	8	-1	9
Pork	11	9	2
Lamb	26	39	-9
Total	12	8	3

**Table 2. Comparison of UK raw meat sales pre- and post the financial crisis.**

Company	Ranking	Capacity (million of birds)	Global production (%)
JBS/Pilgrims	1	2,018	4.0
Tyson Foods	2	1,976	3.9
Brasil Foods	3	1,502	3.0
Doux/Frangosul	4	1,090	2.2
Marfrig	5	734	1.5
Bachoco (Mexico)	6	672	1.3
Perdue	7	650	1.3

**Table 3. The leading global broiler producers.**

If we look over the last decade meat consumption growth has increased by 22%, while population has grown by 12% and this equates to a 9% increase in per capita consumption. Projected population increases for the next decade range from 24% for the Middle East and 11% for China, India and Brazil to zero growth in Japan and just a 1% growth in the EU.

## Where will feed come from?

The four giants (China, USA, EU and Brazil) now have 35% of the world's population and 65% of its meat production. China has a

huge pig population and its livestock will consume more feed than the sum of the other three giants.

Thus, the main issue for China will be where will the ingredients for this feed come from?

In the 1990s the Chinese pork sector represented 70% of global growth and 40% of broiler growth occurred in China and Brazil. These two countries also dominated global growth in beef.

It was very different in the 2000s. Thailand and Brazil had significant volumes of exports returned because of nitrofurans residues. Then avian flu hit various countries and Japan and the EU banned Thai and Brazilian poultry meat imports with the exception of cooked products.

## Economic impact

If you look at Japanese imports of raw poultry meat these were approximately 600,000 tonnes in 1996 from the USA, Thailand, China and Brazil but by 2007 this had dropped to some 400,000 tonnes with virtually all coming from Brazil and a very small amount from the USA.

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Product	Ranking	Daily capacity	Plants
Beef	1	90,000	82
Poultry	1	7,200,000	37
Pork	3	49,000	3
Leather	1	148,500m <sup>2</sup>	12
Dairy	3	1,266 tonnes	7

**Table 4. JBS production.**

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Conversely, over the same period imports of cooked poultry meat rose from 45,000 to 350,000 tonnes with all of this coming from Thailand and Brazil.

In addition, in the 2000s the impact of bio-fuels struck with some 30% of corn production destined for fuel (ethanol) production. This adversely impacted grain prices for live-stock farmers.

Table 2 shows how economics impact on meat consumption. In this table changes over the financial crisis are detailed. Since 2005 the percentage of coarse grains not used for human or animal feed rose significantly.

## Impact of financial crisis

The financial crisis had the biggest impact on meat production and consumption and during 2008-2009 total meat production was flat and for the first time in 50 years global chicken production did not increase and

consumers 'traded down' from more expensive to cheaper, more affordable products.

This decade also saw the introduction of animal welfare, bio-security, environmental and food safety standards. The use of antibiotics for growth promotion was restricted and, in some countries, eliminated.

On top of this, various countries increased their requirements on imported meat and customers, such as Tesco, raised the bar even higher!

ISO, GMP, HACCP, BRC, ACP, IFS, FSIS all involved audits and brought additional

costs to the meat sector. Labour shortages also came into play with the USA using labour from Mexico and Asia, Europe using labour from eastern Europe, and Africa and even Thailand recruiting labour from Myanmar and Laos. In China there is a lot of internal migration of workers.

## Meat sector consolidation

Finally, in recent years we have seen consolidation in the meat sector with the top 10 players being JBS, Tyson, Vion, Smithfield, BRF, Nippon Meat, Danish Crown, Hormel, Marfrig and Shenghui.

The leading broiler producers are shown in Table 3.

Two of the rapidly growing players are JBS and Marfrig and their performance is shown in Tables 4 and 5. Interestingly both of these groups have CEOs who are younger than 40 years old! ■

**Table 5. Marfrig production (excluding Keystone).**

Product	Ranking	Daily capacity	Plants
Beef	4	22,000	13
Chicken	5	3,300,000	10
Pork	-	4,200	3
Turkey	1	30,000	12
Lamb	-	1,000	