

Highlighting the links between feed ingredient costs and meat prices

Nutreco, the Dutch animal nutrition company, recently held a symposium in Madrid, Spain. One of the papers by Nan-Dirk Mulder of Rabobank focused on the uncertain future of feed raw materials and their prices. As feed is up to 70% of the cost of meat, we have decided to share his observations with you.

Nan-Dirk focused on the current raw materials price situation, what we can expect to happen in the future and ways to deal with price volatility.

Before 2007 the prices of wheat, maize and soybeans was relatively stable but since the beginning of that year prices have increased dramatically and been more volatile. Many have referred to 2007 and after as the 'commodity boom years' (see Fig. 1).

Increased market growth

The volatility of the price of feed grains has been influenced by increased market growth, especially for meat production, and the production of biofuels, food shortages, whether at point of harvest or in stocks held, and exchange rates (see Fig. 2).

Other factors, such as the 'Horse Gate' crisis, antibiotic usage and resistance, changes in farming systems and disease issues like bird flu,

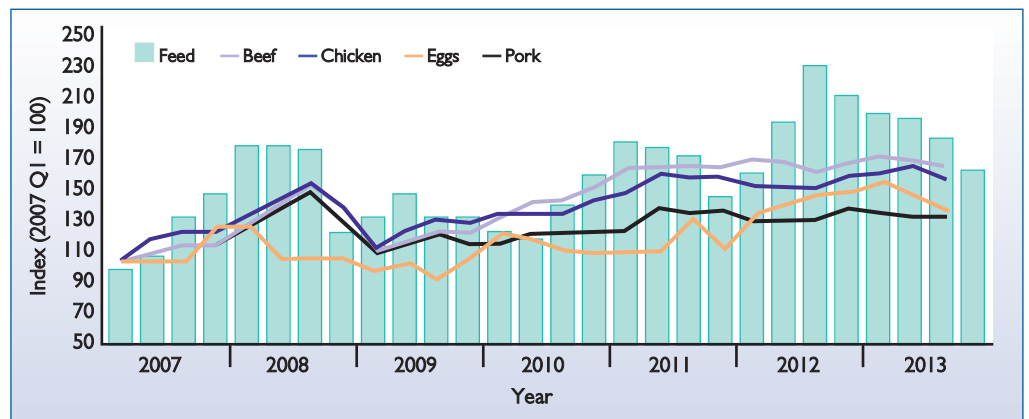


Fig. 3. Global meat and egg price index versus feed cost index.

also created shocks in the supply chain.

If we look at the retail market there are many global challenges.

Obviously the economic crisis has had a big impact, as has the on-going emergence of retailer power.

There has been significant growth in emerging markets while western markets, which are much more mature, have been stable or actually shown a marginal decline.

In western markets consumer issues have been important and will continue to be so, along with higher and more volatile input prices, volatile exchange rates and volatility in the supply of agricultural products.

Against this background, agriculture has not been very successful in passing on higher feed costs in products such as milk, eggs and meat.

Fig. 3 shows how when animal feed prices have gone up the farmers have not been able to recover these costs in their prices.

Shortage of land

If we look at the global food supply challenge we can see the pressures on a finite land supply ultimately come in the demand for crops for human consumption, the demand for crops to feed the animals that produce meat, milk and eggs and the

demand for crops for fuel production. The last of these has been significant over the last decade or so. As land available is limited, increased production is going to come from increased efficiency in cropping and an increased efficiency in the conversion of crops into animal products and biofuels. Poultry is a very good example of what can be achieved!

At the same time we are seeing an increase in the urban population coupled to a decrease in the land available per person for food production (Fig. 4). There is also a decline in global grain stocks as production fails to keep up with demand (Fig. 5).

Continued on page 22

Fig. 1. Grains and oilseed prices (2000-2013): an increasing and very volatile price trend.

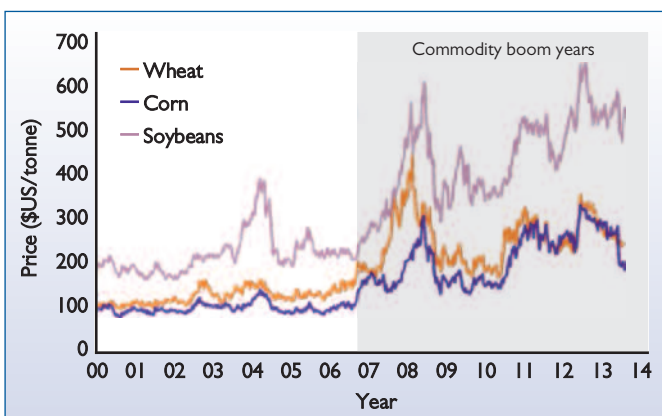
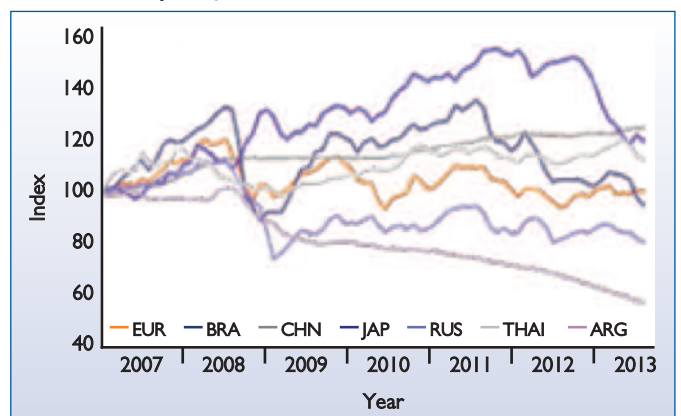


Fig. 2. Increased volatility in US dollar exchange rates in the economic crisis years for seven countries.



Continued from page 21

One of the consequence of urbanisation is higher wages and one of the first things man spends extra money on is an improved diet, which means the consumption of more animal protein. From 210 to 2030 the consumption of animal protein is expected to increase by 45% (see Table 1).

Meat and egg projections

If we look at the projected market growth for meat and eggs from 2012 to 2022 almost 60% of the growth will be in China, Brazil, India, Russia and Sub Saharan Africa and a further 20% in just 10 countries (one of which is the EU).

China, for example, needs a fur-

Table 1. Predicted growth in animal protein consumption between 2010 and 2030.

Animal protein	Demand growth (%)
Seafood	+25
Eggs	+48
Poultry meat	+60
Pork	+42
Beef	+25

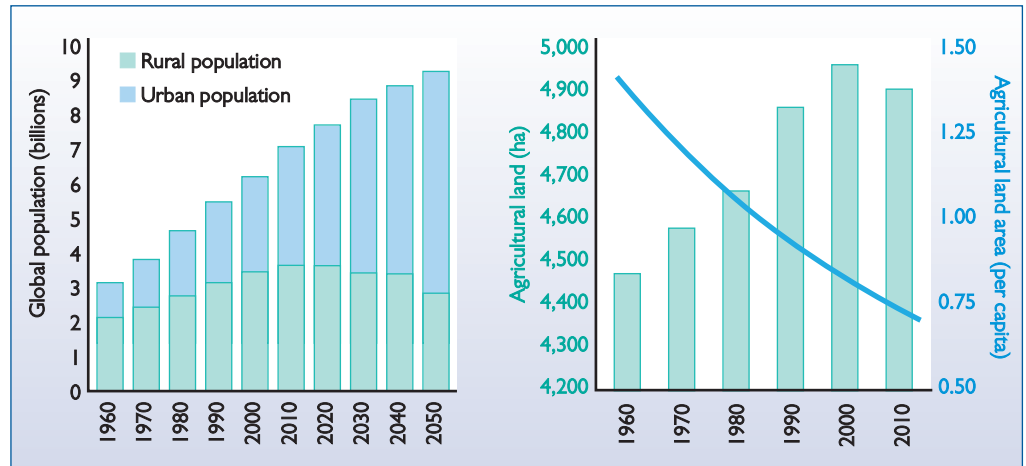


Fig. 4. The key long term global challenge: produce more with less resources. Left, the impact of urbanisation and, right, the decline in agricultural land per capita.

ther 26 million tonnes of animal protein with the vast majority of it being meat.

The second country, Brazil, needs just over five million tonnes with a good half of that being met by poultry meat.

Over 65% of this increase in demand will be in Asia.

An intriguing dilemma is that when it comes to quality agricultural land Asia has relatively limited resources, with most of it being in South America and Sub Saharan Africa.

This is reflected in global exporters

of grain with the USA's importance significantly reduced and that of Brazil and the Ukraine significantly increased.

Advent of biofuels

The advent of biofuels has had its impact with 12% of the world's corn supply and 16% of its cane sugar going into ethanol production and 17, 10 and 25% respectively of soy, palm and rapeseed oil going into biodiesel.

Ethanol production tends to be centred on the Americas (91% of production), while biodiesel production is focused on Europe (44%).

Interestingly, following a surge in demand for biofuels up to 2010 no further growth in demand has been seen.

Any future growth in biofuels is likely to be dependent on the support of governments.

The anti-lobby cites issues such as deforestation and land grabbing, carbon debt and the food versus fuel debate, whereas the pro-lobby cites

jobs and agricultural development, energy security and reducing emissions.

When it comes to the global corn market it would appear that the demand for corn from the USA plus EU is relatively static with the growth in demand coming from the BRIC countries (Brazil, Russia, India and China) – see Fig. 6.

So, what does the future hold for the grains market? Factors that will come into play will include a slow-down in demand for grains for biofuels which will leave the USA with more corn to export and needing new export outlets, the rapid growth and modernisation of the Asian protein industry and new markets which, out of necessity, will have a higher dependency on volatile sources of supply.

Thus, the outlook for grain is lower prices but a greater volatility. Various factors will influence this such as:

Supply factors:

- Agricultural land
- Crop yields per hectare
- Farm management
- Farm input prices
- Weather
- Diseases

Demand factors:

- Feed
- Food
- Biofuels
- Industrial

Policies:

- Trade policy
- Agricultural policy
- Biofuel/energy policy
- Food safety regulations
- Sustainability criteria

Other factors:

- Fund activity
- Exchange rates
- Freight rates
- Price of crude oil
- Market sentiment and speculation
- New non-agricultural market entrants

So, there is a scenario of volatile grain and oilseeds prices coupled to

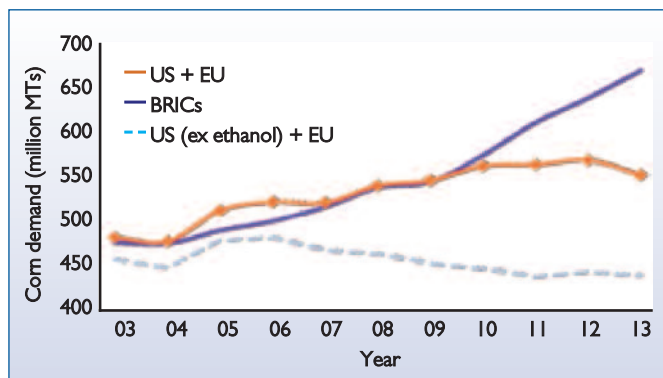


Fig. 5. Global corn demand by market.

volatility in animal product prices, for example meat, yet the ultimate consumer wants stable prices.

This can be illustrated by looking at US processing margins (Fig. 7).

Consumer goals

Consumers are seeking higher incomes, modern distribution, food safety and less animal disease. This will result in higher feed prices which means an increasing demand for compound animal feed as we will get a modern value chain, larger companies, more vertical integration, increasing efficiency, bigger yields and a greater need for value chain management.

This is seeing the evolution of global companies such as Tyson, JBs, Cargill, Marfrig and CPF and the emergence of major Chinese players.

With value chain management, industry will need to rethink supply

chain models. On the pricing front there will be short term spot market pricing models and long term models with strong price management tools.

On the supply front there will be more backwards integration to secure supplies from emerging markets and, when it comes to market intelligence, there will be an even greater need for full market intelligence throughout the chain from animal feed ingredients to the final consumer.

There will be more vertical integration and an increase in value added and further processed products. This is all reflected in animal protein's new paradigm (Fig. 8).

Poultry is the winner!

It is the poultry industry that is best positioned to benefit from the new market circumstances that will arise from lower prices and flexibility. ■

Fig. 6. Supply discipline – animal protein's new paradigm.

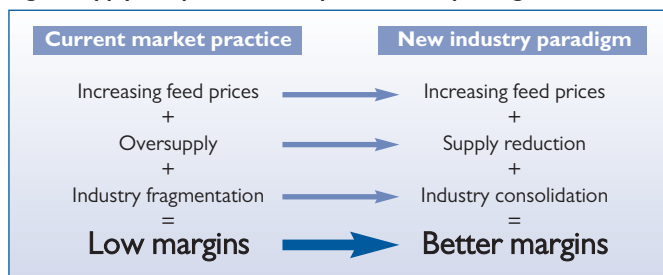


Fig. 7. US egg industry processing margins 2007-2013.

