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VIEWPOINT

HOW WILL THE GLOBAL SUPPLY CHAIN LOOK IN THE FUTURE? [1]

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Drawing on his experience as a Divisional Director with Promar International, the author assesses current movements in the food supply chain, and the consequent future risks and opportunities.

Key words Food supply chain, drivers, price, values, policy, change.

Background

The international agricultural and food supply chain has been subject to a severe shock over the last two years, as the effects of the downturn in the global economy have rippled across the world. Demand for many agricultural products has been suppressed and production across key categories such as meat and dairy has fallen in 2008/9.

While demand and production have both started to recover, there is still a fragile nature to the overall economic recovery, and it is still very uneven. Countries in Asia have come out of the slump quickest. They are at the hub of the global recovery, while in the US and the EU, there are still concerns about the speed and strength at which this can be achieved. At the current time, many questions are still to be answered as to the longer term impact of the crisis, not least in Southern Europe.

What seems clear is that the fundamentals of the supply chain that had come to be accepted as "this is the way things are" have been challenged in a way not seen before. In the future, there are also a range of factors coming together that means that the way it operates will probably never be quite the same again. What has happened in the last few years has gone well beyond being just 'a blip' as some industry commentators predicted.

Key Macro Drivers for Change

There are now a number of huge macro forces at work that food producers, processors, retailers, foodservice operators, as well as in some cases, governments will need to contend with over both the long and short term. These will all help shape the global supply chain in the future. These include:

Global population growth

It is now widely accepted that the world's population is heading for 9 billion as a minimum. Most of this growth will take place in the emerging regions of the world such as Asia and Latin America. Within countries such as Brazil, India and China, there is huge change taking place, with hundreds of

1. This article first appeared *Genus World Winter Publication, 2010/11* (http://www.genusplc.com/about/genus_world.aspx) and is reprinted here by kind permission of the publishers.

millions of consumers moving from low to middle income status and in some cases, upper income status. The implication for food producers (and the companies who in turn supply them) is clear. There will be many more consumers in the world to feed, many of these will be considerably wealthier and as a result will be able to afford and demand higher quality and added value food.

Climate change and the environment

The evidence for long term climate change is strong, and in some areas of the world it is already there. Australia, parts of North America, parts of Africa, Asia and even in Southern Europe and the Former Soviet Union are already feeling the impact of changing weather patterns and the overall impact this can have on the availability of natural resources. Water in particular is set to be a huge issue over the next few years. Some parts of the world will however remain, in relative terms, unaffected. Northern Europe, as an example, seems set to still be fundamentally a good place to farm and process food. The next implication here again seems clear. Farming and food processing businesses will have to look very carefully at how their distribution chains operate, reduce carbon emissions and make much better use of scarce natural resources.

Energy

We might have already reached, or are about to reach in the next five to ten years, the period of so called 'peak oil availability' where oil can be extracted with relative ease and traded internationally at price levels within an accepted norm. There is still plenty of oil and gas in the world to be accessed. Getting it out of the ground however will be more challenging; it will take longer and will be more expensive to do this. Even when we finally have access to it, the nature of increased global demand will have accounted for most of it already. Agriculture and food industries are heavy users of energy. Those that are less energy intensive in terms of how they produce and process food will be at an advantage over those that are not.

International agricultural policy

The direction of change is clear – it actually has been for some time, but still many around the world seem unprepared to accept it. WTO and CAP reforms all point to less protection, less management of markets and industries, more open and less distorted international markets. The global downturn has put added pressure on all forms of government funding and support for agriculture *per se*. The aspiration is set, but achieving it will still be difficult. The EU and Japan still remain largely protectionist in their outlook, while the Cairns Group are pre disposed to more open trade. The US can move between the two it seems. In the future though, the so-called BRIC countries (Brazil, Russia, India and China) and others with fast growing agrifood sectors, such as Thailand, will not easily allow the talks to be stalled and/or diverted from the final end game. There will be compromise of course but in the future, markets will be more open and less protected. Primary production will shift to where it makes sense to do it and not because it is supported by a distorting policy regime.

Volatility

In the last two years, the world economy has been riddled with volatility. This has been in terms of commodity prices, energy prices, currency and exchange rates and the nature of consumer behaviour when shopping for food. While organisations such as FAPRI[2], OECD[3] and FAO[4] are all predicting a return to more stable price patterns, many involved in the actual sharp end of production, processing and distribution of food are predicting that this sort of volatility will become part of the new norm. For those that have been operating in less protected markets and industries around the world, they are inherently more accustomed to dealing with this facet of international trade. For those that have enjoyed various forms of market protection, it has been something of a rude awakening.

The Response of the Supply Chain

The supply chain has been driven in turn by various distinct groups over the last 40 years. In the 1960s and in to the 1970s, farmers still wielded huge influence on what food was available to consumers. Markets where protected and government influence on what was produced and even traded around the world was strong. Marketing boards and centralised procurement was a key feature of the supply chain. They were very much part and parcel of the accepted way of doing things. In the late 1970s and in to the 1980s, food processors came to the fore. Production of food moved away from a commodity focus to a more added value proposition. Large scale food processors began to dictate terms and conditions to farmers around the world.

Into the 1980s and onto the 1990s, supermarket chains began to dominate and force consolidation on the supply chain and make increased technical and commercial demands on their suppliers. The power that the major international supermarket chains now have over their supply base as they look for ever higher standards of efficiency, food safety and innovation is huge.

In mature markets the major supermarkets account for around 80% of all retail food sales. In emerging markets, the percentage of the market held by the leading modern retailers is much smaller, often just 5%, but is poised for growth. Most of the leading EU and US retailers have ambitious plans for the emerging markets where they see huge opportunities. They have mastered the art of selling to mass markets in their domestic arenas over the last forty years. They will take all this skill and expertise with them in to new markets. Their best suppliers will follow them in.

Leading supermarkets have helped make some food processors around the

2. Food and Agricultural Policy Research Institute, Iowa State University
3. Organisation for Economic Co-operation and Development.
4. Food and Agriculture Organisation of the United Nations

world large and successful. Those that have learnt to deal with the demands of the major supermarkets and foodservice/catering companies have prospered. Those that have chosen for whatever reason, or not been able to change have been either forced out of business or been required to often play in niche market areas.

The idea that major supermarkets will somehow go away in the future seems naive. In the future, there will be fewer of them, they will be more global in their outlook and they will need fewer suppliers. The whole process of ‘the big getting bigger’ will be ongoing. This will drive further consolidation at all levels of the supply chain. Only the best will survive and they will need scale and innovation of both products and services to do this. Supermarkets in terms of sheer revenues still dwarf the largest food processors, let alone primary farming businesses and in turn their input suppliers. Who will continue to call the shots in the supply chain in the future?.The answer seems clear at this stage.

In reality, both major international supermarkets and foodservice companies are looking for the same attributes of their suppliers:

- *Scale of operation* The development of global retail and foodservice operations will mean they are looking to work with global suppliers. Strong retailers need strong suppliers with high levels of market and technical understanding, who in turn will want to partner with strong raw material and input suppliers. The ability to work in challenging new markets will be critical, as well as securing existing business in more mature regions of the world. This will require new business skills and bold, but well balanced and long term decision making processes.

- *Security of supply* At a purely commercial level, there is concern amongst the leading food retailers and processors about how they secure the best suppliers for the future. The best farming and food processing companies are in demand. Businesses that can help them identify who these best of class operations are and can help bring them to the table, especially in emerging markets, are in a strong position and at a government level, there are also worries that the impacts of climate change, global volatility and energy demands allied to the booming world population will put an increased strain on global food supplies. Companies that can help provide solutions to these problem areas through the provision of innovative technologies will be favoured and sought after, by both commercial and government partners.

- *Efficient supply* chains Major end users in the global food market will always be looking to increase efficiency as part of a culture of ongoing improvement. Country competition e.g. the EU vs US vs the Southern Hemisphere is being replaced by chain competition, the chains being those of the leading retail businesses and foodservice companies. In the future, producers and processors will often be in the chain of a leading retailer. Being outside any of these chains will leave you in a potentially vulnerable position. These chains will be more streamlined and of a more dedicated, even exclusive nature than in the past. Only those companies that can demonstrate genuinely high levels of market and technical expertise will be able to straddle these chains and work with multiple partners. To do this will require a high international reputation and a critical business mass and to have made themselves all but indispensable to their supply chain partners. Genetics companies have a strong role to play here. With increased spend in R & D (research and development) and the transfer of technology, they can help farmers produce more efficiently whether the issue is supplying a leading retailer with a specific product with enhanced attributes (see the comments on product differentiation below) or meeting the challenge of feeding an extra 3 billion consumers in the world

- *Value for money* There are numerous technical and commercial demands being made on the supply chain and these have been discussed earlier. The implications are that the more complex problems will not be solved readily without investment in R & D and technology transfer. This might prove expensive yet consumers and retailers/foodservice companies are reluctant to pay more for their food supplies. Value for money can be subjective what is good value for money in London, Beijing and Moscow is very different, as might be the experience of shopping in a high quality niche retail outlet, as opposed to a discount store. But the basic message is the same whether we like it or not, price will always be a factor and providing good value for money at whatever level is essential. If solving the challenges of the supply chain is going to have cost implications, as they will, the companies who have already invested or begun to invest in the work required will have a head start. There is no point in re-inventing the wheel, as this will only compound the problems that are likely to arise. In many cases, solutions to the challenges may already or in some cases fully exist. The task is one of effective technology transfer to supply chain partners, rather than just more R & D for the sake of it. Not least, neither governments around the world and the global supply chain cannot afford it.

- *Values for money* The move to being able to demonstrate high levels of corporate social responsibility (CSR), ethical trade and business practise will also be of paramount importance in the future. This can mean different things to different companies and can cover a wide range of activities. It might include for example the sensitive and efficient use of natural resources, investment in social projects, ensuring that labour and staff are not being exploited and well trained for the tasks they have to perform and not engaging in activities that can adversely impact on the environment and communities. The organisation, knowledge base, strength and focus of many Non Governmental Organisations around the world means that any companies not ensuring it has a defendable track record of CSR is potentially vulnerable to unwelcome scrutiny.

- *Differentiation of products* As part of the concept of chain competition, retailers and foodservice companies will be looking for differentiated and new products as a matter of course. This will give them competitive advantage over their rivals. This might take one of several forms products such milk and dairy items that can be produced with lower fat, produced in a more environmentally sensitive manner, with higher functionality, enhanced taste characteristics, better traceability, more provenance, of higher intrinsic quality, better visual appearance, and in some cases, cheaper. Again this starts with the process of input supply. Proactive crop and animal breeding companies will play a key role in all of this.

- *Food safety* This is an issue that simply will not go away. While much of the world's food is produced in a perfectly responsible and safe manner and to high levels of safety, the ongoing outbreak of animal diseases around the world shows what a challenging issue this can be. This might be the incidence of ISA (Infectious salmon anaemia) in Latin American fish farms or the outbreak of Foot and Mouth Disease (FMD) in places such as Japan and South Korea. The UK has had more than its share of similar problems in the past of course with both FMD and BSE (Bovine Spongiform Encephalopathy). This is a global issue not a local one and getting it wrong can be highly damaging to governments and food companies alike. Global food safety protocols as well as the ones developed by leading retailers and food safety will become the norm in the future. Companies in the supply chain who can openly demonstrate high levels of bio-security and a high level understanding of the issues involved will be at a strong advantage

The leading players in the supply chain who are most likely to succeed will need to have both scale and high levels of expertise. They will be of the 'chosen few'. The challenges facing food processors and retailers/foodservice companies are huge. As well as the areas that have largely been mastered to date, such as the ability to move food all round the world safely, they will require answers to a whole range of other new areas that now confront their businesses.

These include the need to feed more consumers on the planet of which many will want higher added and differentiated food products. Meeting the challenges of factors such as climate change, global volatility, more open and less protected markets and demands made on natural resources such as energy and water usage are all complicated tasks. Individual companies (even the biggest) will find it difficult to meet all of these requirements and challenges on their own. They need to access resource and expertise with other partnering companies in the supply chain. Just having excellent products will not be enough in the future. The ability to leverage and share information and genuine knowledge with key supply chain partners will be a key success differentiator.

Conclusions – what will the supply chain look like in the future?

We will see a more collaborative approach to how the supply chain works in the future. In many cases, finding the potential answers required begins with the input suppliers, providers of seeds, feeds, crop protection products and animal breeding services. Around the world, agri-food supply chains are looking to develop joint partnerships and strategic alliances, etc., and this can start at the stage of input supply. Look at what companies such as Syngenta, Bayer, Monsanto are doing in terms of understanding the supply chain. They are forming partnerships and relationships with food processors and retailers to provide workable solutions to ever more complex questions. Developing these relationships takes time and requires a new way of thinking from all involved but the potential reward is high. Genus plc has been doing the same sort of thing with the development of projects with key customers such as the likes of Tesco, Waitrose, Cargill and Mengui, the leading dairy processor in China.

It is clear that the global supply chain is under pressure from commercial, regulatory and environmental forces for change. The situation found around the world over the last 2 years has accentuated the need to find solutions to the problems faced. What we can be sure of in the future will be that the supply chain of the future will be characterised by a combination of the following:

- supermarkets, processors and large foodservice companies will still dominate the end user markets the big will carry on getting bigger;
- the supply chain will carry on consolidating at all stages from the farm base upwards;
- volatility will be a key feature of international markets in the future but closer supply chain relationships are a way of combating this and the need to partner and work in close collaboration with others in the supply chain has never been higher;
- growth will come from emerging markets but mature markets will still be very important to international agribusinesses around the world - getting the right balance will be important;
- the supply chain will be greener and more environmentally aware than in the past and consumers will be more numerous, wealthier and demanding ;
- CSR as an agenda item will come to the fore in a way not seen in the past;
- food will need to be produced in a safer and more efficient manner than in the past and with less chance of being faced with the problem of disease and contamination.

The future business environment will continue to be very tough but also full of opportunities to those with the correct skills set, technical and commercial abilities. The best positioned will be those who have achieved the status of being one of the ‘chosen few’. They will have made themselves indispensable to their supply chain partners.

Looking at all the factors mentioned above it is hard to see that the future operating environment can be anything other than more challenging, potentially volatile and unpredictable. Learning to manage this will be at the heart of the skills set required for successful businesses at all stages of the supply chain. The worlds agricultural and food producing systems and their supply chains all the way from the area of input supply through to the consumer are about to put to the test in a way not seen before.

About the author

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