

Eight key trends driving M&A in Agribusiness



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Agriculture remains arguably the world's most important industry, employing 20 percent of the global workforce. The world's growing population coupled with rising incomes have led to an increased demand for food, feed, ingredients, and associated goods and materials that will continue to rise well into the foreseeable future.

While the agriculture sector remains largely fragmented, it has been able to consolidate more and more into large, integrated operations. Irrespective of sector, size, and type of operations, numerous forces are reshaping the global agriculture industry, leading to a spate of new business models, consolidation, and thus, M&A activity.

For investors, this presents tremendous opportunity. But investing in agriculture is not easy. The value chain can be long and complex, markets can be volatile, competition intense, margins thin, and performance can hinge on a range of unpredictable factors, often in unfamiliar or developing geographies.

In this report, we have identified eight key trends that are shaping the global agriculture industry and driving M&A activity along the way.

1. Declining productivity gains



The Green Revolution transformed food production, but those productivity gains have been slowing down

and have come at large input costs. Productivity of major crop yields is now growing at half the rate of the 1960s and 1970s, and opposition to genetic modification in some markets, most notably the EU, somewhat limits the scope for further gains.

At the same time climate change, population growth, large-scale agriculture, and competing industries have meant that many areas simply do not have enough quality water and land. To take just one example, the US states

through which the Colorado River flows are legally entitled to claim 1.4 trillion gallons more per year than the river actually produces. As a result, food and feed products are a hotspot for M&A activity with new techniques and technology that can do more with limited resources, particularly water. In 2014, Mitsubishi offered

Productivity of major crop yields is now growing at half the rate of the 1960s and 1970s, and opposition to genetic modification in some markets, most notably the EU, somewhat limits the scope for further gains. US\$1.4 billion for Norwegian salmon farmer Cermaq ASA in a bid to create the world's second-largest salmon farming business. By far, fish is the fastest growing source of protein, making farmed fish a much better way to secure food supply than fishing in the wild.

Increasing yields in the EU without resorting to genetic modification is another area of activity, with Syngenta acquiring Lantmännen's winter wheat and winter oilseed rape businesses

in Germany and Poland, in 2014. The deal enables Syngenta to develop better seeds in two of the EU's most important crops.



2. Urbanization



By 2020, more than half the world's GDP growth is expected to come from countries outside the OECD. As these countries are getting richer and more people are moving to cities, their diets are changing too. With increase in disposable income comes a higher adoption

of a 'developed-nation' diet with more calories, more processed food, and more animal protein.

In fact, to meet demand from a growing population with changing tastes, global meat production will need to increase by 74 percent by 2050. The implications are beyond just meeting new product demand. US-style feedlots require 7kg

of grain to produce 1kg of beef, and around 4kg of grain to produce 1kg of pork. The inputs required may vary on the rearing method, but the implication is clear: more farmland will be required to support a changing global diet. Already, 90 percent of global farmland is being used for feed produce, not food for direct human consumption.

Many countries, such as Argentina and Brazil, can simply

utilize their unused land for agriculture, but others, like China, are already using virtually all available land. In fact, in China available land is shrinking due to soil pollution. China had tripled agricultural production since 1961, becoming a net grain exporter until 2007. But a rising

There are abundant growth opportunities in supporting industries, such as breeding, animal-health testing, feed, and vaccines. demand for meat (especially pork), and soil degradation has changed that. China now imports agricultural products worth more than \$115 billion every year.

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some potential in making feed conversion more efficient so that animals produce more meat for the same quantity of feed, an area that could be profitable for companies with unique intellectual property in additives, such as probiotics, enzymes, and acidifiers.



3. Conscious consumers



Globally, consumers are more conscious about health and sustainability extending to both diet –such as gluten-free, organic – and environment. Although this is primarily a developed-world phenomenon, these trends

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are catching up in developing markets too. Governments are tightening food standards and there is increased demand for foods that are certified as sustainable or demonstrate a level of environmental/social commitment.

However, in a complex supply chain, it is difficult to provide these blanket certifications. Cargill and McDonald's recent pilot in Canada tracked 9,000 cattle from birth to burger. This was a relatively small project and it still involved 181 different

operations, including 154 backgrounding operations (an intermediate stage of beef production) and 24 feedlots.

But this is not a trend that will die out soon. In fact, Bayer CropScience predicts that we could be heading toward a future where consumers will be able to scan an in-store item and review its entire life-cycle – from where it was grown to what products were used. Developing markets may not have the same taste for sustainable, fertilizer-free produce, but food quality remains a major concern. In China, for example, a string of scandals has undermined consumer confidence in

> local production. This was the reason behind investment firm KKR's decision to purchase an 18 percent stake in Fujian Sunner Development Co, China's largest chicken breeder and processor. The \$400 million deal was specifically designed to set up a partnership that expands Sunner's operations to provide safe, high-quality chicken for Chinese consumers.

China also accounts for more than 50 percent of global pork consumption, yet large-scale farms in the country provide

just 1 percent of total domestic supply. Larger farms are expected to increase six-fold by 2020, not only due to better efficiency but also because of their higher quality standards. A case in point is China's WH Group Limited's ~\$4.7 billion acquisition of US pork producer Smithfield. A year after the acquisition, WH Group rebranded and sold products with the Smithfield name to cash in on Smithfield's reputation for quality.

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4. Inefficient Supply chains



Supply chains in many parts of the world are still inefficient, with much of the food being wasted before it reaches consumers. In Africa and Asia, as much as 30 percent of all food is wasted in this manner. In Western countries, an even higher proportion of food is wasted

because retailers overstock to ensure that shelves are always full, and because consumers are more wasteful than their Asian/ African counterparts.

The balance of power in supply chains around the world is shifting, with prices, being dictated not by producers but by supermarkets. In the UK for example, small, independent retailers dominated the market until the 1960s. But today, more than 90 percent of food sales are in supermarkets (75 percent in

the largest four chains alone). A similar trend is sweeping developing markets as wealthier consumers demand more choice, and supermarkets expand to meet it.

Overseas investment in agriculture has moved from focusing on land acquisitions to encompassing the entire supply chain, including processing, logistics, ports, and trading. By controlling the supply chain it is possible to weed out inefficiency, secure better prices and have greater control over sustainability and traceability.

For example, China's state-owned COFCO announced in August 2016 that it would purchase the 49 percent it

does not already own of Dutch grain trader Nidera. This expands Cofoco's reach in Europe and Latin America, allowing it to compete with global rivals, such as Cargill.

Even in 2012-2013, the food ingredient sector was

By controlling the supply chain it is possible to weed out inefficiency, secure better prices and have greater control over sustainability and traceability. particularly fragmented, leading to opportunities for consolidation. Global food processing company, Archer Daniels Midland Company, acquired food ingredients provider WILD Flavors for Euros 2.2 billion. The desire for simpler supply chains led to competing bids for Australia's Warrnambool Cheese & Butter by Bega Cheese, Murray Goulburn and Canada's Saputo (eventually won by Saputo for \$500 million) and a 2013 joint venture between Louis Dreyfus Company, the

world's biggest cotton merchant, and Namoi Cotton Co-operative to sell fiber from Australia. The deal gave Louis Dreyfus access to around 50 percent of Australia's cotton.

In the developing world, supply chains are an obvious target for consolidation. The UN FAO provides the example of domestic food processors in West Africa who prefer to import raw materials, such as fruit juice concentrate, because local supply chains are too weak for a reliable supply. Often, the companies involved may be too small and the supply chains too fragmented to make them a serious target for major M&A players.



5. Polarization: large vs. niche



Farming in much of the world is a relatively stable occupation due to generous subsidies, meaning that deal flow in the sector is limited: there is simply little incentive to sell. That is beginning to change as third or fourth generation family members take control and are more open to strategies other than retaining full control. The agricultural industry is currently split into two distinct camps: large, integrated firms at one end of the scale and specialized niche players at the other. Farms in Brazil can now top 100,000 acres for example, while smallholders and family farms are coming together to form cooperatives that enable economies of scale when making purchases and provide more bargaining power over prices.

Cooperative type structures have several benefits for growers and small producers, such as collective bargaining power and sharing of assets and equipment. In many countries cooperatives are actively encouraged by the government as a way to increase productivity. In the Philippines for example, cooperatives in agribusiness form a central part of the national development plans.

From an M&A perspective, however, opportunities are limited as cooperatives are voluntary associations that typically cannot be acquired. But this characteristic is what also makes it difficult for cooperatives to raise capital – leading some to explore alternative capital structures such as raising equity from external investors, which may present M&A opportunities.



5. Polarization: Large vs. niche



We see several such instances in Australia, where ABB Grain, Warrnambool Cheese & Butter and SunRice all corporatized and quickly became targets of M&A. ABB Grain was subsequently merged with AusBulk, Warrnambool was acquired by Saputom and SunRice was bought by Spain's Ebro Foods.

Farming in much of the world is a relatively stable occupation due to generous subsidies, meaning that deal flow in the sector is limited: there is simply little incentive to sell. That is beginning to change as third or fourth generation family members take control and are more open to strategies other than retaining full control. That opens the door to outside investment as well as expansion into other related operations like distribution or processing. There is also a surge in capital in the sector as farmland is seen as an increasingly attractive investment. Agriculture funds raised almost \$4 billion in 2015 alone .

Large companies, on the other hand are looking to expand their global footprint via significant M&A activity. At the time of writing, regulators were considering a proposed \$130 billion merger between Dow and DuPont, which would control 25 percent of global commercial seed sales and 16 percent of world pesticide sales. Meanwhile, European regulators were considering a \$43 billion bid by Chinese state-owned ChemChina for Swiss company Syngenta, a deal that has already been approved in the US. If this deal goes through, it will be the largest foreign acquisition by a Chinese company giving China access to a range of genetically modified seeds. This would not only allow it to compete with global rivals such as Monsanto, but would offer the possibility of significantly raising crop yields in China. Syngenta agreed to the takeover bid after rejecting a \$46.5 billion offer a year earlier from Monsanto.

M&A deals have also been driven by the desire to enter the fast-growing agricultural chemicals (agrichem) market, such as a proposed takeover of Monsanto by Bayer, which at \$66 billion would be the largest deal so far in 2016. Bayer already has some biotech and agrichem, but access to Monsanto's crop chemicals and seeds would allow it to enter new markets.

In 2016 South Korean chemical company LG Chem also entered the agrichemical industry; it's core petrochemical business having slowed considerably, entering the buoyant agrichem market offers it an opportunity for expansion.

6. Price volatility



Commodity prices in general have been volatile in recent

years, and agribusiness has not been an exception. Price volatility has been increased by the rise of biofuels, which tend to reduce the amount of farmland available for agricultural crops. Food prices also tend to roughly track oil prices, which have fallen dramatically in recent years. That, combined with good wheat and rice harvests, led to a 5.2 percent fall in the UN FAO's Food Price Index in September 2015, the sharpest decline in almost seven years.

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and commodities trader Archer Daniels Midland (ADM), which paid \$170 million in 2014 for Specialty Commodities, a distributor of health foods such as nuts, seeds and fashionable ancient grains like quinoa

and chia. The deal increases ADM's exposure to markets deemed higher margin than bulk grains.

It has also led companies to attempt to move up the value chain through acquisitions, such as ingredients manufacturer

For producers specialized in one area, this can prove challenging, particularly as risks from climate change and civil strife appear set to continue. Some have responded

years.

Ingredion that bought Penford Corp for \$340 million in 2014. The deal allows Ingredion to take advantage of the growing demand for the nature-based additives that Penford manufactures.

by attempting to diversify – such as US food processor



7. Big data



Data has the potential to reshape agribusiness by combining information on weather and prices with realtime conditions in the fields. But it is a long way from

realizing its full potential, partly due to the fragmented nature of supply chain: data may be captured by multiple players at different stages but integrating them in a commercially meaningful way is still a challenge.

In developing markets the data may not exist in the first place, though the falling cost of technology and rising smartphone penetration may help to address this.

Ag-tech is becoming increasingly competitive as technologies such as satellite imagery, drones, remote

sensors, big data and cloud services spill out of Silicon Valley and into other industries. Despite being a relatively young field there have already been some major

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acquisitions, such as Monsanto's 2013 purchase of The Climate Corporation, which examines data on weather, soil and fields to provide insights to farmers. The \$930 million deal gives Monsanto access to technology which can monitor and predict problems in individual fields, potentially boosting yields.

Agricultural equipment maker John Deere is currently awaiting regulatory approval to purchase

The Climate Corporation's hardware division. Both companies produce equipment that plants seeds at high speed and at the optimum depth based on a variety of factors.

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8. Food security



Agriculture is an intensely political subject, with protectionism and concern over availability often trumping economics. The international competition for food security can sometimes be overhyped: despite the headlines about wealthier nations grabbing farmland in the developing world, its impact is relatively small. China's Development Research Centre for example estimates that of the 50 million hectares of overseas land used to grow the country's imports of edible oils and oilseeds, just 1 percent is actually cultivated by Chinese companies.

Nevertheless, food security will remain a significant

factor in M&A activity. Broadly speaking, food security falls into two areas:

a. boosting domestic production

to provide self-reliance b. securing land or imports from overseas.

Different nations are looking to expand domestic production

via different means. Russia plans to invest \$11 billion to expand domestic agricultural industries over the next five years with a third of this directed at meat producers. China's purchase of Swiss agricultural company Syngenta, on the other hand, aims to ensure that it can feed its still-growing population. China is home to 19 percent of the global population but just 8 percent of its arable land. Where many developing countries have turned over more land to farming, in China not only is there little land left, soil pollution has resulted in the shirking of available farmlands.

The desire for food security can prevent as well as drive M&A activity. For example, the Australian government vetoed a bid by US grain trader ADM to take control

of the country's largest agribusiness, Graincorp. The decision was linked to Graincorp's ownership of critical infrastructure, but there were also concerns that the deal could undermine public confidence in foreign investments. In July 2016, ADM tried to sell its remaining 19.85 percent stake in Graincorp, with media reports citing the government's rejection of a bid by Chinese company Shanghai Pengxin to buy S Kidman & Co, a cattle station company, as proof that the new government was not as open to foreign agricultural ownership.

Faced with limited scope to increase domestic supply,

Chinese President Xi Jinping has pushed for outward foreign direct investment (FDI) in agriculture as a national food security strategy. The situation is even more urgent in the Gulf states, which rely on imports for as much as 90 percent of their food. They appear to have switched their focus from

greenfield investments in Africa to buying established producers in more developed markets.

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drive M&A activity.

A combination of poor infrastructure and local hostility means that much of the multi-billion dollar investment in Africa never materialized, leading to a search for opportunities elsewhere. In 2012 the UAE's AI Dahra paid \$400 million for eight agricultural companies in Serbia. And in 2013 a consortium of Saudi groups – dairy giant Almarai, grain importer AI Rajhi and Salic, the agriculture arm of the country's Public Investment Fund sovereign wealth fund – bought Continental Farmers Group, which operates in Poland and Ukraine, for approximately \$78 million, a hefty premium over its share price.



Conclusion

Agriculture is one of very few industries which affects every person on the planet. With a growing population, changing climate and increased demand for a Western-style diet, agriculture faces some clear challenges. In short, it has to do more with less. For much of the 20th century, the agricultural value chain was relatively obscure compared to many other industries. As that changes, it is more important now to understand the forces reshaping the sector. The trends outlined in this report are predictable: populations will continue to grow, and tastes will continue to change. But others are harder to predict.

Climate change is leading to unprecedented weather patterns, many regions continue to suffer economic and political instability, and technology could well disrupt the agricultural sector as it has so many others that had been too slow to adapt.

Some of the acquisitions currently awaiting regulatory approval are enormous, and how successful they are remains to be seen. But one thing is for certain: in terms of M&A activity, and quite possibly change in general, the current century promises to be a much more interesting one for agriculture than the last.

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Ann. Date	Target Business	Country	Buyer	Country
In Anti-Trust Approval	Syngenta SG	Switzerland	China National Chemical Corp	China
In Anti-Trust Approval	Dow AgroSciences & DuPont Crop Protection	U.S.	Dow AgroSciences & DuPont Crop Protection	
Oct 16	M.P.Evans Group	UK	Kuala Lumpur Kepong Berhad	Malaysia
Oct 16	China Shengmu Organic Milk Limited	Hong Kong	Inner Mongolia Yili Industrial Group Co., Ltd	China
Sept 16	Potash Corp. of Saskatchewan Inc. & Agrium Inc.	Canada	Potash Corp. of Saskatchewan Inc. & Agrium Inc.	Canada
Sept 16	Monsanto Company	U.S.	Bayer AG	Germany
Jun 16	Glencore Agricultural Products	Switzerland	Canada Pension Plan Investment Board (40%)	Canada
Jun 16	HAVFISK	Norway	Leroy Seafood Group	Norway
May 16	The North Australian Pastoral Company	Australia	OIC Limited	Australia
Apr 16	Fiagril	Brazil	Hunan Dakang International Food and Agriculture	China
Apr 16	Illovo Sugar	South Africa	Associated British Foods	UK
Mar 16	GMG Global	Singapore	Halcyon Agri Corporation	Singapore

Mar 16	Halcyon Agri Corporation	Singapore	Sinochem International Corporation	China
Jan 16	China Shengmu Organic Milk	Hong Kong	Nong You	China
Dec 15	Tereos Internacional	Brazil	Tereos Participations	France
Nov 15	Advanta	India	UPL	India
Nov 15	Kulim (Malaysia)	Malaysia	Johor Corporation	Malaysia
Aug 15	Olam International	Singapore	Mitsubishi	Japan



Seller	% sought	Equity value	Logic Behind The Deal
Syngenta SG	N/A	43,000	Strategic acquisition to build seed giant. U.S. security hurdles overcome. Deal expected by the end of the year.
N/A	N/A	N/A	Merger designed to create \$130 billion market cap seed and crop portection business giant - anti-trust decision expected February 2017
Listed (JPMorgan Asset Management (UK), FIL Investment Services (UK), FIL Limited, Alcatel Bell NV, Pension Arm, James Sharp & Co., Asset Management Arm)	100%	434	Expansion of listed Malaysia-based company's production and processing of palm products and natural rubber.
Listed (Sequoia Capital China, Hwabao Trust Co., Ltd., Sequoia Capital 2010, L.P., Greenbelt Global Limited, Kuanjie (Cayman) Investment Center LP)	37%	1,840	Expansion of China-based company's dairy products processing business.
N/A	N/A	N/A	With revenues of around \$36 billion, created the largest crop nutrient supplier in the world.
Listed (The Vanguard Group, Inc., Goldman, Sachs & Co., Glenview Capital Management, LLC, Capital World Investors, JPMorgan Chase Bank, N.A. Merkezi Columbus, Ohio - Istanbul Turkiye Subesi)	100%	56,010	The biggest takeover of any business in 2016 to date. Immense seed and crop protection cost savings and market leadership.
Glencore plc	40%	6,255	Investment fund investment in Switzerland-based integrated grain and oilseed business of Glencore plc.
Aker Capital, Fausken Invest	63.2%	374	Expansion of Norway-based harvester, producer and retailer of seafood products
M.P.Evans Group	80%	230	Fund investment in Australia-based beef-cattle company that operates cattle stations
Fiagril Participacoes SA	57.6%	347	China-based animal husbandry business expansion into Brazilian agricultural products and services, and biodiesel production and sales market.
Listed (Investec Asset Management Limited, Public Investment Corporation Limited, Kagiso Asset Management (Pty) Limited, Allan Gray Limited)	48.7%	771	UK-based food, ingredients and retail group investment in listed South African sugar producer and manufacturer of downstream products.
Listed (CIMB Securities (Singapore) Pte Ltd., Maybank Kim Eng Securities Pte. Ltd., OCBC Securities Private Limited, HSBC (Singapore) Nominees Pte Ltd., DBS Nominees Pte. Ltd., Nomura Singapore Limited, Sinochem International (Overseas) Pte. Ltd., UOB Kay Hian Private Limited, Phillip Securities Pte Ltd., DBSN Services Pte. Ltd., BNP Paribas Nominees Singapore Pte. Ltd., Citibank Nominees Singapore Pte. Ltd., GMG Holding (HK) Ltd., Panwell (Pte) Ltd., Raffles Nominees (Pte.) Ltd., DBS Vickers Securities (Singapore) Pte. Ltd., Investment Arm, DB Nominees (Singapore) Pte Ltd, Bank of Singapore Nominees Pte Ltd.)	100%	381	Expansion of Singapore-based producer and merchandiser of natural rubber products.
Listed (Clear Tower Investments Limited)	67.3%	333	Expansion of natural rubber divivion of China-based company engaged in the logistics, industrial investment and trade of chemical raw materials and agricultural chemicals, rubber products and metallurgy products.
World Shining Investment Limited	19%	1,803	Expansion of China-based investment holding company with interests in companies engaged in dairy farming business and milk business.
Listed	30.2%	281	France-based investment holding company expansion of interests in companies engaged in producing cereal and sugar.
Listed (Venus Capital Management, Inc., Warburg Invest Kapitalanlagegesellschaft mbH, Tree Line Advisors (Hong Kong) Ltd., Archana Overseas Private Limited, Sun Global Investments Limited, New Leaina Investments Limited)	51.6%	695	Diversification of India-based agro- and industrial chemicals company the development, production and distribution of hybrid agricultural field crop seeds and plant seeds.
Listed	44.3%	1,172	Expansion of Malaysia-based company palm oil, healthcare and property business.
Temasek	12.0%	5,431	Japan-based diversified conglomerate's expansion into the sourcing, processing, packaging, and merchandising of agricultural products.



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Contact us



Satyanarayan Ramamurthy Head, Global Strategy Group KPMG in Singapore T: +65 6213 2060 E: sramamurthy@kpmg.com.sg



Chris de Lavigne Principal, Global Strategy Group Agribusiness & Chemicals T: +65 6213 3419 E: cdelavigne@kpmg.com.sg

kpmg.com.sg/socialmedia



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