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ChemChina: Implications and
Lessons for India**

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Abstract

Syngenta, a Swiss seeds and pesticides manufacturing group, one of the largest in Europe and a world leader, is all set to be acquired by ChemChina, a Chinese state-owned enterprise for a record US\$43 billion. One of the largest and boldest attempts to date by a Chinese firm to invest in a business abroad, it is believed to be part of China's comprehensive strategy to ensure food security for its population in the age of climate change, shrinking and polluted open and ground water resources, degrading land quality and increasing demand for high protein foods. Syngenta's acquisition, with its technological superiority in seed production and state-of-the-art technologies in crop protection chemicals, is potentially beneficial to China in facing challenges to its food security. Both the US and Europe approved the merger plans after considering its implications for their national security and in terms of competition. Though the merger in the agrochemical industry space is not new - the industry has been seeing consolidation with the top five companies controlling 75 per cent of the industry - acquisition by a Chinese state-owned entity raises a number of questions. No doubt, it will benefit food security-conscious China but it can also have implications for food sovereignty and security in the region. India particularly has reasons to take a long-term view of this acquisition. The entry of genetically modified foods, changing dynamics in negotiating positions in the WTO on matters related to agriculture and increased agricultural imports from China may be some of the issues that may need to be considered over the long haul.

Introduction

In early February 2016, China's state-owned National Chemical Corp. known as ChemChina, offered to buy Syngenta - a Swiss seeds and pesticides manufacturing group, one of the largest in Europe, and a world leader - for US\$43 billion. It has been termed as one of the largest and the boldest attempts, to date, by a Chinese firm to invest in a business abroad. It is believed to be part of China's comprehensive strategy to ensure food security for its growing population in the age of climate change, shrinking and polluted open and ground water resources, degrading land quality and increasing demand for high protein foods. Syngenta's acquisition, with its technological

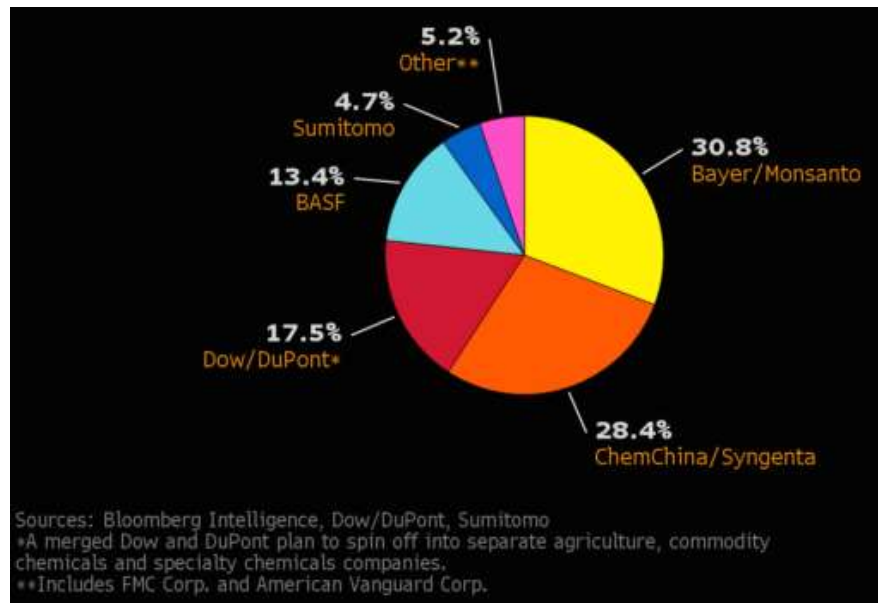
superiority in seed production and state-of-the-art technologies in crop protection chemicals, is potentially beneficial to China in facing challenges to its food security. This article discusses the implications of the ChemChina-Syngenta deal for India and if there are any lessons for it in the process. Before deliberating on the said objective, it will be appropriate to discuss the changing contours of the Global Agribusiness Industry to provide the reader with a holistic view of the evolving situation.

Consolidation in Seeds and Pesticide Manufacturers within the Global Agribusiness Industry

The global agribusiness industry is estimated to be US\$5 trillion in size and it is expected to grow further. Arguably, measuring the size of agribusiness accurately is indeed a difficult affair considering the complexities and volumes involved. However, it is for certain that the industry is bound to grow. The major driving factors behind the growth forecast are the rise of demand due to a growing global population and the loss of land, water and other ingredients for food production. Reliance on technology, new seed varieties that could cope with increasingly hotter climates, new age fertilizers and pesticides are some of the undeniable needs of modern agriculture.

The Global Agribusiness value chain, following the McKinsey Consulting report (McKinsey & Company 2015), can be divided into four parts, namely inputs, production, primary processing and secondary processing/retail. While every stage in the value chain is important for the healthy development of the industry, the input stage in the value chain is of critical importance. Industries that develop new pest and heat resistant seeds and pesticides that can control newly evolved pests can effectively control this entire industry value chain. In this input stage, 75 per cent of the market is dominated by five large seeds and pesticides manufacturing/agrochemical/crop chemical companies - Syngenta, Bayer, Monsanto, Dow Chemicals and Dupont (Clapp, Hunt and Hayes 2016). If the proposed acquisitions, namely Bayer/Monsanto and Chemchina/Syngenta, go through then these two new entities will have nearly 60 per cent of the share (see Fig. 1). Three entities put together will have control over 75 per cent of the seed and agrochemicals market (*Eco Business* 2016). More importantly, China will gain control of nearly 30 per cent of the Seed and Crop Chemicals market.

Figure 1
Share Held by the Large Seeds and Pesticides Firms



Source: Brennan (2016).

It is clear from the above picture, consolidation is happening at the top. However, Chemchina, a state-owned Chinese company acquiring Syngenta, which generates a quarter of its revenues from North America, has raised many eyebrows in Washington.

It has to be noted that ChemChina was not the first bidder for Syngenta. Monsanto, had bid thrice before taking the decision to withdraw its proposal. The company explained that Monsanto's offer of US\$46 billion, which was higher than the ChemChina offer, was partly in cash and the rest in the form of Monsanto's shares, while ChemChina offered full cash transaction. With Monsanto's shares falling and given regulatory pressures, the company accepted the offer from ChemChina (Rana 2016). It is understood that Syngenta initially considered the offer by Monsanto as too low but settled for ChemChina's proposal considering its financials and falling sales (US News 2016). Acquisition by ChemChina gives Syngenta an opportunity to expand in China and other emerging markets.

There have been several mergers and acquisitions in the agrochemical space, with Syngenta itself a product of a merger in 2000 between Swiss drug giant Novartis and AstraZeneca PLC, an Anglo-Swedish pharmaceutical company. Table 1 gives an idea of the mergers and acquisitions that have been happening in agrochemical space. While there were seven major companies at the start of the millennium, now there are only five.

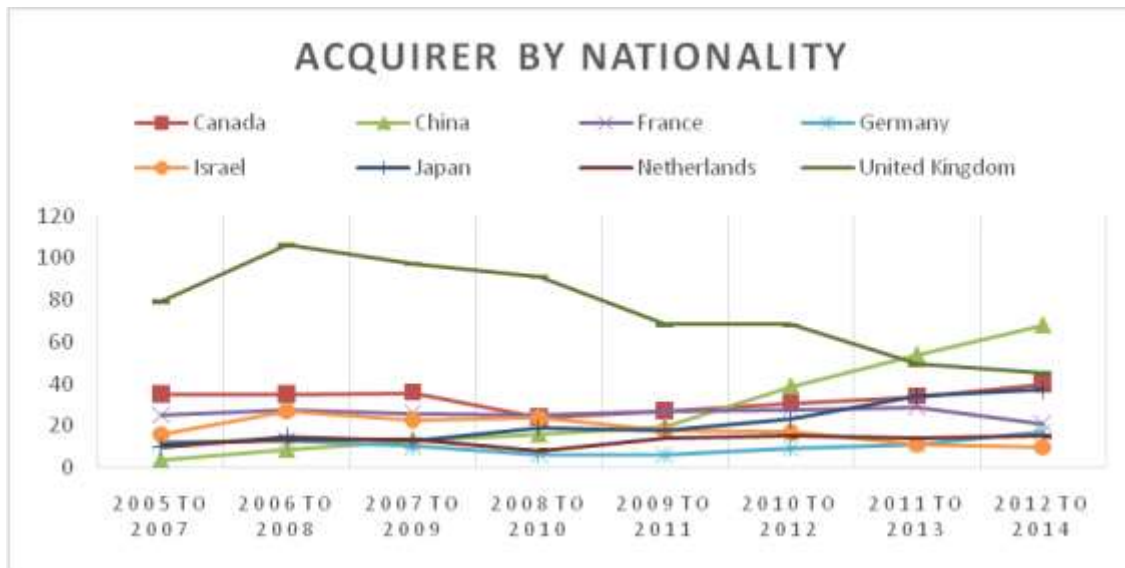
China's Acquisitions in the United States and Europe

China has been aggressively pursuing acquisitions/investments in the US and Europe in the past decade and that has been a subject of intense debate and to some extent a political issue. The Committee on Foreign Investments in the United States (CFIUS), the inter-agency committee authorized to review transactions that could result in control of US businesses by a foreign person ('covered transactions'), in order to determine the effect of such transactions on American national security, in its latest report finds that China has been the single-largest acquirer of businesses in the US in the past several years (Committee on Foreign Investments in the United States 2016).

Between 2012 and 2014, 68 notifications (in a total of 358 notices) have been received from China to acquire US companies, amounting to 19 per cent of the total number of notifications received in the three-year period, up from 17 per cent in the period 2011 to 2013. United Kingdom with 45 notices (13 per cent), Canada with 40 notices (11 per cent) and Japan with 37 notices (10 per cent) held the next three positions. Among the sectors covered, manufacturing stood first with 33 notifications from China. Mining, utilities and construction stood next with 19 applications. Finance information and services, with 13 applications and the sector Wholesale, Retail and Transportation with 3 notifications ranked a distant third and fourth respectively (See Table 2).

The line diagram below clearly illustrates the rise of China as a major acquirer of American businesses. It can be seen that acquisitions from the UK have nearly halved, transactions involving Canada have stagnated, and Japanese investments too are no match to the growth of Chinese acquisitions.

Figure 2
Acquisition Trends in Select Countries

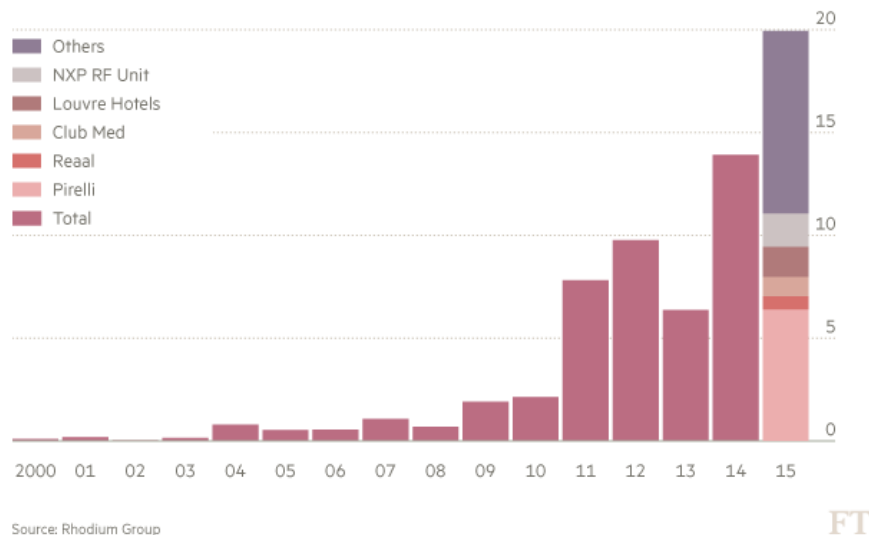


Source: Committee on Foreign Investments in the United States (various years).

In Europe, too, investments by Chinese companies have grown considerably in the past several years (Hellström 2016). In 2015, Chinese companies spent nearly US\$20 billion on acquisitions, up from US\$14 billion the previous year. Big ticket investments include ChemChina's US\$7.3 billion acquisition of Italian tyre group Pirelli and Shanghai Jin Jiang's acquisition of Europe's second-largest hotel group, Louvre Hotels, to the tune of US\$1.2 billion (Kynge 2016). Figure 3 below illustrates Chinese investment trend over the past 15 years.

The trend that is seen here is not very different from China's integration into other parts of the world, say, for example, Africa. It is clear that China has embarked on a journey to acquire assets around the world to feed its rapidly growing economy.

Figure 3
Chinese Acquisitions in Europe



Source: Kynge (2016).

Reactions in the US to Chemchina's Syngenta Bid

The Syngenta acquisition attempt received negative reactions from some quarters of the political elite in the US. Chuck Grassley, the Iowa Republican Senator who currently chairs the Senate Judiciary Committee, has raised serious concerns about the deal. He says, 'Because the food and agriculture sectors are part of the nation's critical infrastructure, this merger raises questions about the potential national security implications' (*Financial Times* 2016). Although the company is Swiss-owned, its biotech division is based in the US and is a big player in the US and international markets for genetically-modified seeds and as mentioned earlier, a quarter of its revenues come from the US (White and McLaughlin 2017).

Criticism and distrust notwithstanding the US Federal Trade Commission gave its approval to the deal in late April 2017 (Syngenta 2017). The approval is on the condition that ChemChina will divest three of its products. ChemChina's generic subsidiary ADAMA, a wholly-owned Israel-based subsidiary, which competed with branded products of Syngenta Paraquat, Abamectin and Chlorothalonil (Chee 2017). Acquisition of Syngenta without divesting the

three products would have resulted in decreased competition and increased costs for the US customers (Federal Trade Commission 2017).

The approval by the US for the acquisition has been closely followed by approval from the European competition regulator. Similar to the concerns raised by the US Federal Trade Commission, the European Competition Regulator identified areas where the proposed merger could impact competition. Overlapping products related to pesticides, fungicides and herbicides and plant growth regulators were flagged by the regulator and commitment from ChemChina to divest have been obtained before giving the approval (European Commission 2017).

Possible Impact of Syngenta Acquisition on China

ChemChina's acquisition of Syngenta, one of the largest seeds and pesticides manufacturers in the world, gives China access to technologies that may help it deal with some of the problems that it has faced on the agricultural front. Land has become a highly valued asset and is in big demand with the opening up of the economy for industrial development. Affluent urban societies are eating into agricultural neighbourhoods and lands are being lost to the process of urban expansion. Depletion of ground water at an alarming rate combined with pollution is impacting agriculture. Climate change and unpredictability in rainfall are also harming agricultural production. Added to the above challenges, new pests that have evolved are proving to be a challenge to traditional pesticides. Seeds that can withstand higher temperatures, which yield food even with the reduction in water availability and resist pest attacks are some of the needs of modern Chinese agriculture. Also the changing food consumption patterns of a population becoming rich, demanding high-protein food is a challenge as well.

Added to the internal dimension of protecting domestic food security, Syngenta's acquisition gives ChemChina an opportunity to become an active player in the US and European agrochemicals market. It offers opportunities for strengthening the bargaining position of Chinese firms in the global markets.

Impact of Syngenta Acquisition by ChemChina on India

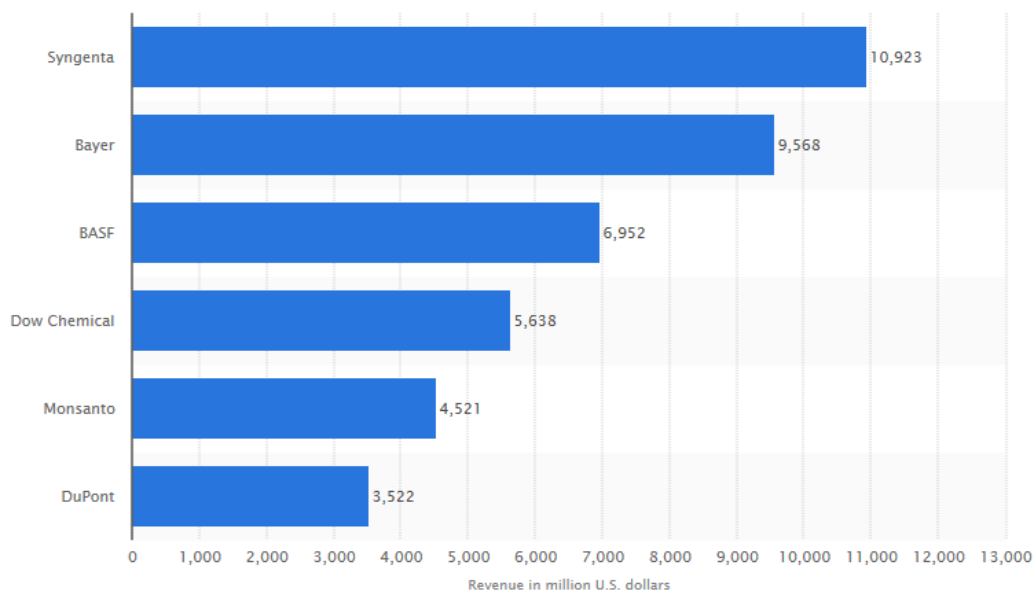
As China joins the group of powerful countries, through the acquisition of Syngenta, which actively produce GMO seeds, Chinese position on agriculture negotiations in the WTO is bound to be more supportive of GMO. India and China are currently members of the Asian Developing Members group, G20 and G33 groupings, and find convergence in their positions related to agriculture negotiations in the WTO. They have been pressing for greater access to agricultural markets in the developed world. They have been resisting opening up of domestic agricultural markets to the developed world. As far as GMO is concerned, India owing to pressure from NGOs and the farming community, has for long been adopting a cautious approach towards GMO seeds. There have been many protests against moves to bring GMO seeds such as Bt brinjal into the country. With China acquiring Syngenta, third largest producer of proprietary seeds in the world, the equations in the agriculture groupings in WTO is bound to change.

Syngenta has a 9 per cent market share in the global proprietary seed market (see Table 3). This can affect the Indian position on GMO and it may result in a larger flow of GMO seeds into the country in the years to come. Also, assuming that technologically superior seeds increase productivity and overall production, the surplus production will result in China trying to find greater access to food markets everywhere, including in India; the surpluses may end up in Indian markets undermining Indian agriculture.

Finally, as the processed food industry is already an importer of agricultural produce from China, India could end up having many food products imported from China that are directly or indirectly GMO-based. For example, dairy powders and other foods that are imported could have ingredients that are grown with GMO seeds. This could be a health issue for the future (see for instance, Dona and Arvanitoyannis 2008).

In 2013, in the crop chemicals segment, Syngenta, in terms of revenue, was the largest agrochemical company. Acquisition of a company that ranks third in proprietary seed production and first in terms of revenue will certainly, therefore, give China a strategic advantage. It will be able to use this acquisition to play an important role in the global agribusiness market.

Figure 4
World's Largest Companies by Revenue in the Agrochemical Sector



Source: Statista (2017).

Should India Undertake Similar Efforts for Ensuring Food Security?

The agricultural sector in India is under stress. In particular, small farmers in India have suffered. The National Crime Records Bureau (NCRB) reports that between 1995 and 2014 more than 300,000 farmers committed suicide in India (cited in Basu et al. 2016). It is important for the government to take steps to promote agriculture, protect the welfare of the farmers, and protect the environment and the consumer. Among the steps the government could take is crop protection, which could help minimise loss of agricultural produce before reaching the markets.

The Indian Crop Protection Market was estimated at US\$3.8 billion in 2012 and with a growth of 12 per cent per annum it is expected to touch US\$6.8 billion in 2017. Nearly 50 per cent of the revenues come from exports and it is expected to grow further (*Business Standard* 2017). Given the 0.6kg per hectare consumption of crop protection chemicals in India compared to world average of 3kg/ha, the industry sees opportunities to expand consumption (*Business Standard* 2017). However, it has also been facing challenges from

spurious pesticides, which account for 25 per cent by value and 30 per cent by volume of all formulations sold in India (Federation of Indian Chambers of Commerce and Industry 2015).

A serious challenge to India, which can also be seen as an opportunity, is from the growth of biopesticides - pesticides derived from natural materials, animals, plants, bacteria, and so on - that control pests by non-toxic mechanisms. Serious research and effort into this area would result in sustainable development. Buying up foreign multinational companies through Indian public sector enterprises may not bring about the Second Green Revolution required to meet the challenges faced by Indian agriculture.

Better roads, rural financing for farm development, mechanization, market information access, educating the farmers, improving irrigation facilities and investment in water storage infrastructure, improving food storage facilities, establishing of food processing industries, support for exports, promotion of biopesticides and other measures by the government would help the stressed agriculture sector usher in the much-talked about Second Green Revolution.

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APPENDIX

Table 1
Mergers in Agro Chemical Industry, 1994-2000

<i>Beginning 1994</i>	<i>By 1997</i>	<i>By 1999</i>	<i>By end 2000</i>
DowElanco (US)	DowElanco	Dow AgroSciences	Dow AgroSciences
DuPont (US)	DuPont	DuPont	DuPont
Monsanto (US)	Monsanto	Monsanto	Monsanto (80% Pharmacia)
Bayer (EU-G)	Bayer	Bayer	Bayer
Ciba Geigy (Swiss)	Novartis (Swiss) (acquired Merck)	Novartis (Swiss)	Syngenta
Sandoz (Swiss)			
Zeneca (ex-ICI)(EU-UK)			
Hoechst (EU-G)	AgrEvo	Aventis	Aventis
Schering (EU-G)			
Rhône-Poulenc (EU-Fr)			
BASF (EU-G)	BASF	BASF	BASF/Cyanamid
Cyanamid (US) [purchased Shell Agriculture (UK/Neth.) in 1993]	Cyanamid (AHP)	Cyanamid (AHP)	

Source: Pesticide Action Network UK n.d.

Table 2
Total number of 'Covered Transactions' by Various Countries

<i>Countries</i>	<i>2005 to 2007</i>	<i>2006 to 2008</i>	<i>2007 to 2009</i>	<i>2008 to 2010</i>	<i>2009 to 2011</i>	<i>2010 to 2012</i>	<i>2011 to 2013</i>	<i>2012 to 2014</i>
Total	313	404	358	313	269	318	322	358
Australia	18	27	21	15	8	10	7	7
Canada	35	35	36	24	27	31	34	40
China	4	9	13	16	20	39	54	68
France	25	28	26	25	27	28	29	21

Germany	12	13	10	6	6	9	11	17
India	7	6	6	2	2	6	6	7
Israel	16	27	23	24	18	17	11	10
Italy	7	11	10	10	7	6	3	1
Japan	10	15	13	19	18	23	34	37
Netherlands	11	13	13	8	14	15	14	15
Russia	2	10	8	12	4	6	3	4
Spain	8	9	7	4	7	9	7	5
Sweden	2	1	3	8	14	13	10	6
Switzerland	8	11	10	6	3	8	9	15
UAE	10	11	11	5	3	1	2	3
United Kingdom	79	106	97	91	68	68	49	45
Subtotal	254	332	307	275	246	289	283	301

Total: Refers to the total number of notifications received in a given three year period

Subtotal: Refers to the total number of notifications received from the countries listed in the table above.

Source: Committee on Foreign Investments in the United States (various years).

Table 3
World's Top Ten Seed Companies, 2011

Rank	Company	Seed Sales, 2011 US\$ millions	% Market Share
1	Monsanto	8,953	26.0
2	DuPont Pioneer (USA)	6,261	18.2
3	Syngenta (Switzerland)	3,185	9.2
4	Vilmorin (France) (Groupe Limagrain)	1,670	4.8
5	WinField (USA) (Land O Lakes)	1,346 (est.)	3.9
6	KWS (Germany)	1,226	3.6
7	Bayer Cropscience (Germany)	1,140	3.3
8	Dow AgroSciences (USA)	1,074	3.1
9	Sakata (Japan)	548	1.6
10	Takii & Company (Japan)	548	1.6
Total Top 10		25,951	75.3

Source: ETC Group (2008)



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