July 21, 2016

Re: China National Chemical Corporation proposed purchase of Syngenta AG

Dear Secretary Lew, Attorney General Lynch, Secretaries Johnson, Pritzker, Carter, Kerry, Moniz and Vilsack, and Ambassador Froman:

Food & Water Watch and the National Farmers Union urge the Committee on Foreign Investment in the United States (CFIUS) to block the proposed acquisition of Syngenta AG (Syngenta) by China National Chemical Corporation (ChemChina) due to the potential significant threats to national security from this deal.

The proposed takeover of a major seed and agricultural chemical company poses significant potential threats to U.S. security interests; undermines food security in the United States and worldwide; disrupts trade flows; and accelerates the international consolidation of the food and agribusiness industries to the detriment of American farmers, rural communities, and consumers.
The Peterson Institute of International Economics describes CFIUS’ role as “protect[ing] the United States against national security threats that might emerge from foreign takeovers of U.S. firms.”¹ A cross-border agrichemical and seed acquisition of this scale could have tremendous impacts on U.S. security interests, as well as U.S. food security and the global food supply. The proposed ChemChina-Syngenta merger warrants a thorough investigation and rejection because it potentially impairs U.S. national security, it would give a foreign state-owned enterprise control of U.S. industrial facilities and it affects critical energy and food security infrastructure.²

**The Proposed ChemChina-Syngenta Deal**

The proposed $43 billion purchase of Syngenta by ChemChina would create the world’s largest manufacturer and distributor of agrichemicals and pesticides.³ The deal would be the largest Chinese purchase of any foreign firm in history and is larger than the next four largest deals combined.⁴ Cross-border purchases of U.S.-based chemical companies and facilities represented 10 percent of all foreign direct investment in manufacturing firms in 2014.⁵

The takeover of the Swiss-based agrichemical and seed company includes manufacturing facilities in the United States, perhaps explaining the 22 percent premium ChemChina offered.⁶ The proposed deal is a covered transaction under the authority of CFIUS because it gives foreign control of an entity engaged in interstate commerce.⁷ Syngenta offered to voluntarily submit an application to CFIUS.⁸

Syngenta was created by a merger between the agribusiness lines of Novartis and AstraZeneca in 2000 and it produces crop protection chemicals (herbicides, insecticides and fungicides), a wide range of agricultural seeds (field crops, vegetables and flowers) as well as lawn and gardening seeds and chemicals.⁹ Syngenta is a major agrichemical and biotechnology seed manufacturer with over $10 billion in insecticide and herbicide sales and $2.8 billion in seed sales in 2015.¹⁰ It is the world’s biggest crop protection company (even after the proposed Dow-DuPont merger), with 21 percent of the global market in crop protection chemicals.¹¹

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² 50 USC App. §2170(b)(2)(B)(I to III).
⁷ 50 USC §2170(a)(3); 31 CFR §800.204(a).
Syngenta is the largest seller of agrichemicals in the United States.\(^\text{12}\) It also is a major seller of U.S. field crop seeds, selling 10 percent of soybean and 6 percent of corn seeds.\(^\text{13}\) More than one-fourth (25.9 percent) of Syngenta’s $13.4 billion in global 2015 sales were generated in the United States.\(^\text{14}\)

ChemChina has grown from a small chemical start-up to one of the largest chemical companies in the world. By 2015, it ranked 265 on the *Fortune* Global 500, with $41.8 billion in revenues and $43.9 billion in assets.\(^\text{15}\) It is one of China’s largest firms, operates in 140 countries and generated $45 billion in revenue in 2015.\(^\text{16}\)

It began as an industrial cleaning company and grew by purchasing 107 government-owned businesses to become China’s leading chemical company.\(^\text{17}\) ChemChina’s CEO is considered to be “China’s most aggressive deal-maker” and “China’s ‘merger king’” according to media reports.\(^\text{18}\) In the past decade the company has bought a string of foreign firms including a tire manufacturer (Pirelli, Italy), a chemical supplier (Elkem, Norway), an industrial equipment manufacturer (KraussMaffei, Germany), a food additives company (Adisseo, France), a plastics company (Qenos, Australia), a silicon manufacturer (Rhodia Global Silicone, France) and a pesticides manufacturer (ADAMA Agricultural Solutions, Israel).\(^\text{19}\)

**Proposed merger would give Chinese government control of major agrichemical and seed company**

Federal law mandates that CFIUS shall investigate any cross-border transaction that would give a foreign government control of U.S. facilities or companies.\(^\text{20}\) This consideration is based on whether the “management and investment decisions are exercised independently from the controlling government.”\(^\text{21}\) The proposed ChemChina-Syngenta deal would give ChemChina — and thus the Chinese government — control over Syngenta; ChemChina’s president would chair Syngenta’s board of directors and the majority of the board members would come from ChemChina.\(^\text{22}\)

ChemChina is one of more than 100 companies directly controlled by China’s State Council (akin to the Cabinet of the United States).\(^\text{23}\) The Chinese central government maintains firm control over state-owned enterprises,\(^\text{24}\) ChemChina’s president is a senior member of the Chinese Communist Party and there is a party office inside ChemChina’s headquarters.\(^\text{25}\)

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\(^\text{12}\) Roumeliotis (2016).
\(^\text{13}\) Bunge and Kendall (2015).
\(^\text{19}\) *Associated Press* (March 26, 2016); Wyant (2016).
\(^\text{23}\) *Associated Press* (March 26, 2016).
Government support for state-owned enterprises like ChemChina make it easier to finance global expansion.\(^{26}\) The Chinese chemical industry began a serious foreign buying spree during the global downturn of 2008 and 2009, when China’s outbound chemical foreign investment was $97 billion and constituted from one-third to half of global cross-border chemical mergers.\(^{27}\)

ChemChina is especially leveraged — its debt is nearly ten times revenues — but as a state-owned enterprise it still has managed to secure financing for the Syngenta takeover.\(^{28}\) ChemChina is financing the Syngenta deal with $50 billion in loans from foreign and Chinese lenders.\(^{29}\) Much of the funding is expected to come from government-backed sovereign wealth funds or state-owned banks.\(^{30}\) ChemChina already received a $5 billion investment for the deal from another state-owned industrial conglomerate, Citic Ltd.\(^{31}\) The level of government financing — through sovereign wealth funds, direct capital infusions and loans from government-owned banks — suggests a considerable level of government interest and potential control over Syngenta if the proposed deal is approved.

**Proposed Merger Poses Potential National Security Risks**

The proposed ChemChina-Syngenta merger could pose potential national security risks to the United States. CFIUS must consider the “nature of the U.S. business” and whether a proposed deal “creates susceptibility to impairment of national security” and the “potential consequences” of that vulnerability.\(^{32}\)

Syngenta presents unique national security concerns. Many of the Syngenta research labs and production plants are close to U.S. military assets, which could provide a credible base for espionage against the United States government or domestic companies. Syngenta’s chemical plants could potentially become more vulnerable to sabotage, terrorism or accidents under the weaker safety and security culture of Chinese chemical companies.

ChemChina and Syngenta have downplayed and dismissed these significant national security concerns. Syngenta claimed that there were “no obvious national security concerns” that the company identified in its internal self-investigation.\(^{33}\) In March, Syngenta stated that it was “very convinced there is no security issue.”\(^{34}\) At another point, Syngenta said the purchase posed no “significant national security issues.”\(^{35}\) CFIUS’s mandate provides an open-ended and broad consideration of national security screening for proposed foreign direct investments.\(^{36}\) CFIUS applies this consideration to “genuine national security concerns alone.”\(^{37}\) CFIUS is directed to “determine the effects of the transaction on the national security of the United States.”\(^{38}\)

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26 Hartmann and Deutschmann (2012) at 7.
27 Ibid. at 4.
29 *Associated Press* (March 26, 2016).
30 Scissors (2016).
33 Roumeliotis (2016).
38 50 USC App. §2170(b)(1)(A).
Chinese corporations and Chinese state-owned enterprises that aim to purchase U.S. firms or U.S.-based facilities can raise national concerns in large part because China can be viewed as a potential geopolitical and economic adversary.\(^{39}\) The CFIUS national security review considers whether the foreign purchaser “might take action that threatens to impair U.S. national security” and has the capacity or intent to cause harm.\(^{40}\) This is especially true for state-owned enterprises from foreign governments with a record of “other national security-related matters.”\(^{41}\)

China has deployed military agents to commit cyber-espionage against U.S. firms to deliver commercially valuable economic intelligence to state-owned enterprises in China.\(^{42}\) As the *Economist* observed, the distinction between “spying for national security and spying for commercial advantage makes no sense in a country where the state-owned enterprise is king.”\(^{43}\)

In 2016, the Director of National Intelligence testified that China was a “leading intelligence threat” to the United States (along with Russia), based on its “capabilities, intent and broad operational scope.”\(^{44}\) In 2015, the Joint Chiefs of Staff identified China as threatening U.S. security interests with its substantial military budget and its expansionist presence in the South China Sea.\(^{45}\) China projected military spending would reach $146 billion in 2016 after rising by an average 9.5 percent annually from 2005 to 2014.\(^{46}\) The U.S.

\(^{39}\) Moran (2015) at 1.
\(^{40}\) 73 Fed. Reg. 236 at 74569.
\(^{41}\) Ibid. at 74571.
Navy’s Office of Naval Intelligence reported that the Chinese navy was rapidly building ships and projecting force throughout the Western Pacific.\textsuperscript{47}

**Proximity of Syngenta facilities to military installations**

The proximity to multiple U.S. bases and key military installations would provide a potential staging area for Chinese espionage efforts to advance the nation’s military program. According to the Pentagon, the Chinese government is actively engaging in espionage to modernize its military.\textsuperscript{48} U.S. intelligence sources have reported that China operates a decentralized network of independent, freelance operatives searching for any information on military technology.\textsuperscript{49} The military-backed comprehensive espionage efforts include cyber-spying and human intelligence intrusions to upgrade the country’s military capabilities.\textsuperscript{50}

Syngenta operates 35 facilities throughout North America including research and development, chemical plants and other facilities, including marketing and sales.\textsuperscript{51} There are at least 15 chemical plant, seed manufacturing plants and research facilities \textit{(see Map 1)}.\textsuperscript{52} Many of these Syngenta sites are close to U.S. military installations, which could provide a platform for espionage by the Chinese government. CFIUS appropriately gives close scrutiny to the proximity of the targeted investment acquisition to U.S. military facilities.\textsuperscript{53} CFIUS reports “that foreign governments are extremely likely to continue

<table>
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<th>Syngenta Location</th>
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<th>Military Facility</th>
<th>Distance (miles)</th>
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\textsuperscript{50} Alexander and Stewart. (May 7, 2013.)
\textsuperscript{51} Syngenta Annual Review 2015 at iii.
\textsuperscript{52} Syngenta is not a publicly traded U.S. company that is required to disclose its properties. The Syngenta locations were based on job listings for research and chemical plants in the United States. It excludes sales, marketing and political offices.
\textsuperscript{53} Held (2016).
to use a range of collection methods to obtain critical U.S. technologies.”

CFIUS has denied or modified cross-border mergers that targeted firms with facilities close to military installations. In 2012, CFIUS blocked the sale of a U.S. windfarm to a Chinese company because it abutted the airspace of a Naval Weapons Systems Training Facility. In 2013, a Chinese firm dropped its proposed purchase of a 60 percent stake in a U.S. mining company because during the pre-filing negotiations, CFIUS purportedly required the divestiture of certain assets near U.S. military facilities. In 2013, CFIUS forced the Chinese state-owned oil company to divest oil platforms and oil leases in the Gulf of Mexico owned by takeover target Nexen because of proximity to the U.S. Naval Air Station in Belle Chase, Louisiana.

Many of the Syngenta facilities are comparably close to U.S. military bases (see Table 1) as well as state National Air Guard units. Several of the plants are close to high-profile military assets. One of Syngenta’s Nebraska plants is within ten miles of the Strategic Air Command Headquarters at Offutt Air Force Base. Syngenta’s plant in San Gabriel, Louisiana is within 80 miles of the naval air base in Belle Chase—a facility that raised concerns in the Nexen case. The Wilmington, Delaware, Syngenta plant is within 40 miles of Aberdeen Proving Ground, a high-security military weapons and vehicle testing ground and home to the Army’s headquarters for units dedicated to combatting chemical, biological, radiological and nuclear hazards.

**Proposed ChemChina-Syngenta merger could increase chemical plant vulnerability**

Syngenta’s facilities are chemical manufacturing plants that could be terrorist targets or vulnerable to sabotage or accident. At least two Syngenta plants are on the Department of Homeland Security’s index of high-risk chemical plants—the Houston, Texas and Baton Rouge, Louisiana facilities. Syngenta itself described the Louisiana plant as a “highly hazardous chemical manufacturing facility.”

Chemical plants in industrialized countries are vulnerable to sabotage and terrorism related accidents. In 2013, an unknown person intentionally set a fire at a western Texas fertilizer plant that killed 15 people, injured 260 more, destroyed 193 homes and left a 10 foot deep crater that spanned nearly 100 feet. In 2015, a man linked to radical Islamist organizations blew up a delivery truck inside the security perimeter of a U.S. chemical plant in France, apparently attempting to trigger a larger explosion of the stored chemicals at the

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54 CFIUS (2016) at 32.
57 Skadden (2014).
59 Bunge (March 23, 2016).
60 Browning (2016).
62 Held (2016).
64 Ibid.
The United States recognizes these significant risks and requires plants to “appropriately address the security vulnerability” and report them to the Department of Homeland Security and share information about the chemical hazards with state and local first responders.

The Chinese chemical industry has a terrifying safety record that may make it more vulnerable to accident, sabotage and terror penetration. In 2015, a chemical plant explosion in Tianjin killed more than 170 people and destroyed 17,000 homes, highlighting widespread safety problems in the industry. ChemChina has had its own chemical safety problems. In 2007, a ChemChina facility explosion killed five workers, sent 14 to the hospital with serious injuries and forced the evacuation of 2,000 residents vulnerable to a potential toxic gas leak. In 2013, after another notable disaster in the industry, ChemChina’s newsletter reported that “ChemChina President Ren Jianxin took stock of the current safety landscape of ChemChina, pointing out that many industrial accidents had occurred at ChemChina so far and the situation remained severe.”

China’s chemical sector’s dangers are heightened by weak safety rules and lax enforcement that have facilitated a host of industrial accidents; one audit found significant safety problems at 14.6 percent of nearly 600 surveyed chemical plants. These problems are especially acute at government-owned chemical plants. The Tianjin explosion “exposed a range of systemic problems, from the lack of regulation for handling hazardous chemicals to the collision of businesses and corrupt officials,” according to a Renmin University professor. Business consulting firm AT Kearney reports that the weak oversight is worse at state-owned firms, noting that they “receive preferential treatment in both regulations and enforcement” which makes the government companies “often less diligent with compliance.”

The proposed ChemChina-Syngenta merger could increase the vulnerability of Syngenta’s chemical plants. ChemChina has an admittedly checkered safety record and operates in a chemical sector with weak regulatory oversight that is frequently compromised by corruption and favoritism to state-owned businesses.

**Proposed Merger Transfers Critical Technologies**

The proposed ChemChina-Syngenta merger would transfer critical technology to a foreign state-owned enterprise. CFIUS should scrutinize transactions that effectively transfer advanced, confidential or sensitive information to foreign companies or foreign state-owned enterprises. ChemChina’s proposed Syngenta takeover would include its portfolio of high-tech agrichemicals, including pesticides, crop protection products, seeds and advanced fertilizers.

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73 Hartmann and Deutschmann (2012) at 11.
74 Skadden (2014).
75 *Associated Press* (March 26, 2016).
Syngenta maintains it has “unrivaled breadth and depth of technologies across chemicals, seeds and biotech traits.”\textsuperscript{76} ChemChina’s Chairman and President has said that the company’s global merger strategy was to “obtain advanced technology” and he trumpeted the capture of “hundreds of patented technologies” from its takeover of French chemical companies.\textsuperscript{77} Syngenta’s chief operating officer stated that ChemChina was seeking “the quality of our research, the portfolio of our scientists and our technical and commercial experts around the world […] to help more significantly address the modernization of China’s agriculture.”\textsuperscript{78}

CFIUS must consider the national security implications of technology transfers which include “select agents and toxins” among critical technologies acquired by foreigners to receive especial scrutiny.\textsuperscript{79} The CFIUS regulations refer to federal statutory provisions that include biotechnology products and other research among these agents and toxins, explicitly listing genetic elements, recombinant and/or synthetic nucleic acids, and recombinant and/or synthetic organisms.\textsuperscript{80} Syngenta is “a leading player in seed treatment and genetically modified traits,” has the “highest rate of trait innovation in the industry” and its research is “unique in combining chemistry, genetics, breeding and computational science to develop new products and solutions.”\textsuperscript{81}

The proposed deal could be part of a coordinated effort by China to acquire these critical technologies. Chinese businesses seek to partner with or purchase Western firms in part to secure their technology and intellectual property. Chinese state-owned enterprises are encouraged to pursue cross-border mergers in order to “acquire much-needed technologies,” according to professors from Peking University and Stanford University.\textsuperscript{82} In 2014, CFIUS reported that “there may be an effort among foreign governments or companies to acquire U.S. companies involved in research, development, or production of critical technologies for which the United States is a leading producer.”\textsuperscript{83}

China considers agricultural technology to be a strategic gem for these cross-border takeovers.\textsuperscript{84} China’s twelfth Five Year Plan focused on developing self-sufficiency in chemicals and developing national champions like ChemChina that can aggressively pursue access to foreign chemical technologies and processes.\textsuperscript{85} China frequently requires U.S. companies to share their intellectual property as a condition of securing market access to China.\textsuperscript{86}

A portion — perhaps a substantial portion — of this critical technology may have been financed in part by U.S. taxpayers. CFIUS should consider whether Syngenta and the U.S government partnered on research into

\textsuperscript{76} Syngenta Annual Review 2015 at 3.  
\textsuperscript{77} Koch and Ramsbottom (2008) at 3 and 5.  
\textsuperscript{78} Wyant (2016).  
\textsuperscript{79} Referencing 7 CFR §331 and 9 CFR §121; CFIUS (2016) at 37 and 38.  
\textsuperscript{80} 7 CFR §331.3(c); 9 CFR §121.3(c); 42 CFR §73.3(c).  
\textsuperscript{81} Syngenta Annual Review 2015 at 8 to 10.  
\textsuperscript{83} CFIUS (2016) at 29.  
\textsuperscript{84} Scissors (2016).  
\textsuperscript{85} Hartmann and Deutschmann (2012) at 1 and 13.  
sensitive chemicals or seeds.\textsuperscript{87} A review of the U.S. Department of Agriculture Current Research Information System database reveals more than 200 USDA funded studies in which Syngenta is mentioned.\textsuperscript{88}

Syngenta has also developed research into critical technologies cooperatively with U.S. land grant agricultural research colleges. For example, Syngenta provided at least $2.65 million in research grants to Texas A\&M University between 2013 and 2014, $1.49 million to University of Missouri between 2004 and 2013 and over $500,000 to Cornell University between 2006 and 2016.\textsuperscript{89} These grants provide funding to public research institutions which often provide joint support for the research through indirect facilities and administration costs (administrative support, laboratory assets, utilities and other support).\textsuperscript{90} This likely represents only a small sample of the Syngenta funding to the more than 100 U.S. land grant colleges.

The proposed deal could make it more difficult for the United States to access the fruits of government funded research. One current USDA-funded project examining genetic improvements in cereal varieties, being performed by USDA Agricultural Research Service scientists, has been stalled by the ChemChina-Syngenta merger, as the investigators describe “new obstacles” they faced negotiating access to a “root specific promoter” from Syngenta.\textsuperscript{91}

Finally, the proposed ChemChina-Syngenta deal could also make other U.S. firms and farms more susceptible to commercial espionage. U.S. authorities have identified a pattern of Chinese nationals attempting to steal patented seed technology. In 2016, a Chinese businessman plead guilty to stealing patented corn seeds.\textsuperscript{92} In 2013, two Chinese scientists were indicted for stealing patented rice seeds.\textsuperscript{93} The FBI and Justice Department have stated that cases of espionage in the agriculture sector have been growing and U.S. companies, government research facilities and universities have all been targeted.\textsuperscript{94} The patented corn trade secrets case implicated a Chinese state-owned enterprise.\textsuperscript{95}

\textbf{Proposed Merger Threatens Global Food Security and U.S. National Security}

Food security is a critical component of national security. The U.S. is fortunate in its current capacity to feed our nation and many others across the world. President Obama recognized that global food security is an important component of U.S. national security.\textsuperscript{96} Senator Johnny Isakson noted that global food insecurity

\begin{footnotes}
\item[87] Raice (2016).
\item[89] Analysis of grants awarded to university agricultural and other departments from University of Missouri, Texas A\&M University and Cornell University.
\item[95] Rodgers (January 27, 2016).
\end{footnotes}
can impact U.S. national security because the “lack of access to affordable, nutritious food impacts not only developing nations’ economies and productivity, but the international economy and U.S. national security.”

Major General Darren Owens (U.S. Army, Ret.) recently testified to Congress that “Without American agriculture providing adequate supplies of food and fiber at a reasonable cost we would all be dependent on other nations and that could place the food security and ultimately the security of the nation at risk.” These security implications are global. Maj. Gen. Owens further stated “A nation without food security has only one problem. That one problem has proven that it will escalate into many other problems destabilizing every aspect of an entire nation, and that impact can be felt on a global scale.” The Arab Spring uprising that ultimately contributed to the instability in Syria and beyond was both ignited and exacerbated by food insecurity and rising food prices throughout the region.

Food security is a piece of our critical national security infrastructure. The Department of Homeland Security’s 2003 National Strategy for Critical Infrastructures and Key Assets identified food and agriculture as a component of the critical infrastructure of the security of the United States. It specifically included crop production and seed, fertilizer and agrochemical supply chains in this critical infrastructure, stating, “the fundamental need for food, as well as great public sensitivity to food safety makes assuring the security of food production and processing a high priority.”

The proposed ChemChina-Syngenta merger strengthens China’s control of the global food supply and food manufacturing. Syngenta is the world’s largest agrichemical manufacturer with a 23 percent market share and ChemChina’s ADAMA is the seventh largest with 6 percent of global herbicide and pesticide sales. Syngenta operates in 90 countries across the world and ChemChina is the world’s largest generic herbicide and insecticide producer with products and patents in 120 countries, suggesting the reach of its fertilizers and other agrichemical businesses. The deal would further China’s efforts to secure and control worldwide food production resources.

The Chinese government and Chinese companies are aggressively purchasing farmland in the developing world to secure access to productive agricultural land and water resources. Chinese sovereign wealth funds, Chinese government entities and Chinese companies have pursued or finalized more than 100 land deals in the developing world covering an estimated 5.2 million to 8.9 million acres between 2006 and

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99 Ibid. at 12.
102 ETC Group. “Putting the Cartel Before the Horse.” Communiqué No. 111. September 2013 at 10.
In 2016, Australia rejected an effort by China-based Dakang to purchase a cattle operation encompassing one percent of the nation’s land area. China has also aggressively pursued food processing. In 2013, Shuanghui (now the WH Group) bought the largest pork processor in the United States (Smithfield). The state-owned enterprise Bright Food Group already owns the formerly British food manufacturer Weetabix and since 2014 has purchased a 50 percent stake in New Zealand’s largest meatpacker and a controlling stake in Israel’s largest dairy. By investing in agribusinesses, farmland and food processing, China and Chinese investors are increasing the nation’s role on the global food landscape and providing a stronger and potentially more destabilizing role in global food security. The proposed purchase will further these trends.

The CFIUS statute identifies transactions that would create national security risks from the foreign control of critical infrastructure. The CFIUS regulations define critical infrastructure as any “system or asset” that is “so vital to the United States that the incapacity or destruction of the particular asset” by the foreign purchasing company “would have a debilitating impact on national security.” The proposed ChemChina-Syngenta deal would strengthen the capacity of China to curtail global access to seeds and crop protection technologies, potentially disrupting the food security of other countries including the United States, with ramifications on global stability and U.S. national security.

**Proposed Merger Could Compromise U.S. Energy Security**

Syngenta is a leading developer of biotechnology seed varieties designed to produce biofuel and chemical processes that can improve biofuel production. Already, Syngenta has developed cutting edge corn seeds designed for ethanol production. Biofuels help to reduce dependence on foreign oil, which enhances U.S. national security. Biofuels also contribute to the U.S. economy, create jobs building critical energy infrastructure and can provide savings for drivers, especially when gasoline prices rise.

The proposed ChemChina-Syngenta merger would give control of Syngenta’s biofuel product development and innovation to a foreign state-owned enterprise. CFIUS should evaluate the effects of any proposed cross-border merger on critical infrastructure including energy capacity. Firms that provide products and services that have implications for U.S. national security including in the “energy sector at various stages of the value chain” should be evaluated. This evaluation should include “the long-term projections of United States requirements for sources of energy.” ChemChina could withhold the Syngenta biofuel developments from the U.S. market and U.S. military — including those that might have been developed with U.S. government-backed research programs.

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109 50 USC App. §2170(a)(6).

110 50 USC App. §2170(f)(5).


112 50 USC App. §2170(f)(10).
Biofuels are an increasingly important component of U.S. transportation fuel. In 2015, ethanol accounted for 9.5 percent of blended gasoline sales for transportation fuel.\textsuperscript{113} Ethanol from corn accounts for 90 percent of biofuel production; the remainder is biodiesel primarily refined from soybean oil. In 2015, U.S. farmers produced 14.8 billion gallons of fuel ethanol and nearly 1.3 billion gallons of biodiesel.\textsuperscript{114}

Syngenta is the preeminent company engaged in the research and development of crops destined for biofuels.\textsuperscript{115} Syngenta sells genetically engineered corn designed for ethanol production and has developed emerging technology that enhances ethanol yield from corn kernels.\textsuperscript{116} Syngenta recently released the Enogen corn variety with an enzyme in the kernel that works better than enzyme additives used by ethanol refineries and allows the plants to produce more ethanol per bushel and requires less energy.\textsuperscript{117}

The Syngenta corn variety and refining process has the potential to significantly increase ethanol yields. Syngenta has licensed growers to produce Enogen grain in seven states, supporting 18 ethanol plants with 1.3 billion gallons of ethanol capacity.\textsuperscript{118} Syngenta’s Cellerate technology allows ethanol refiners to generate 20 percent more production in combination with the Enogen biofuel corn variety — Syngenta estimates these two advances yielded an estimated 3.3 billion gallons of ethanol last year.\textsuperscript{119}

\textit{Proposed cross-border merger could foreclose military access to future energy alternatives}

Many CFIUS reviews have considered the national security implications of foreign firms or state-owned enterprises that provide goods and services to the U.S. government and military.\textsuperscript{120} CFIUS should consider “domestic production needed for projected national defense requirements.”\textsuperscript{121} These concerns are heightened if the buyer could terminate these relationships with the United States.\textsuperscript{122}

The U.S. military recognizes the role of biofuels in energy security — including energy efficiency, reducing energy dependency and improving energy sustainability. The military is the single largest buyer of fuel in the United States.\textsuperscript{123} The Navy has identified energy as a critical component of its ability to “provide the global presence necessary to ensure stability, deter potential adversaries, and present options in times of crisis.”\textsuperscript{124} Last year, the Navy required all Flex-Fuel vehicles to use E85 (85 percent ethanol-15 percent gasoline) where it is available.\textsuperscript{125}

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\textsuperscript{116} Syngenta Annual Review 2015 at 16.

\textsuperscript{117} Shaffer, David. “Biotech sows seeds for ethanol.” \textit{Minneapolis Star-Tribune}. February 1, 2015.

\textsuperscript{118} Syngenta. “Enogen improves the energy equation.” \textit{Syngenta Thrive}. Spring 2016.

\textsuperscript{119} Syngenta Annual Review 2015 at 16; Syngenta. [Press release]. “Cellerate technology enhanced by Enogen corn demonstrates significant production increase in trial.” April 25, 2016.

\textsuperscript{120} 73 Fed. Reg. 236 at 74570.

\textsuperscript{121} 50 USC App. §2170(f)(1).

\textsuperscript{122} 73 Fed. Reg. 236 at 74571.

\textsuperscript{123} Spencer, Jim and David Shaffer. “Military joins biofuels push.” \textit{Minneapolis Star Tribune}. August 17, 2011.


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Both the Navy and Air Force are actively testing biofuels to replace and supplement traditional fuels to reduce the security risk from depending on fuels from unstable and potentially hostile regions. In 2013, the Department of Energy invested $18 million in four research projects to create cost effective advanced biofuels. In 2016, the Navy launched a fleet of ships powered by alternative fuels.

Syngenta is already actively developing biofuels with military applications. Syngenta has a Centre for Sugarcane Biofuels Development that is breeding new sugarcane varieties designed to maximize biofuel yields and generate cellulosic biofuel from sugarcane waste. Syngenta has also been developing sugarcane designed to produce biodiesel jet fuel in a project with the Department of Energy, University of Florida and University of Illinois.

ChemChina would have the ability to prevent Syngenta from sharing biofuel advancements with the U.S. military. The law requires CFIUS to take into account the potential impact on domestic production to meet domestic military requirements. CFIUS should reject cross-border purchases of firms that provide the military with crucial goods or services that cannot be adequately replaced by other providers. The proposed ChemChina-Syngenta merger could potentially reduce or foreclose access to biofuels necessary for U.S. military readiness.

**Proposed Merger Exacerbates Consolidation in Agrichemical Sector, Harming Farmers and Consumers**

The proposed ChemChina-Syngenta deal would increase consolidation and market power in the seed and agrichemical industries, harming consumers and farmers. It would also have substantial negative implications for innovation in critical technologies, the food supply chain and food security. This proposed deal is not occurring in a vacuum. As CFIUS considers the ChemChina-Syngenta deal, Dow and DuPont have proposed merging their agricultural business lines and Monsanto and Bayer are in the midst of merger negotiations.

The proposed deal would join Syngenta’s seed and agrichemical crop protection lines with ChemChina’s fertilizer and crop protection businesses, including its 60 percent stake in ADAMA Agricultural Solutions, the world’s biggest generic pesticide manufacturer. In the United States, the seed market is already intensely consolidated; the top four firms produced 83 percent of corn seed and 77 percent of soybean seed in

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130 University of Illinois at Urbana-Champaign. [Press release]. “Grant helps project realize ‘ultra-productive’ biofuel crops, attract investors.” May 10, 2016.
131 50 USC App. 2170(f)(1-2).
134 Wyant (2016).
Moreover, the majority of seeds have “stacked” biotechnology traits from more than one company. The proposed deal would enable ChemChina to exert anticompetitive pressure on the seed and agrichemical market, drive up prices that farmers pay for seeds and other inputs and undermine the economic viability of independent farms. With ChemChina in control, Syngenta would likely act to further the business interests of not only its corporate parent but also China itself. Syngenta would have an incentive to focus its development on seed varieties engineered to work with patented ChemChina agrichemicals, vertically integrating the two firms’ products into a more expensive product for U.S. farmers. The proposed deal could hinder innovation because Syngenta would be more likely to foreclose new developments from the U.S. market. For example, it could refuse to cross-license Syngenta seed patents for stacked seed traits offered by other seed companies.

This would enable ChemChina to leverage its market power over the entire U.S. crop sector, limit the choices of U.S. farmers, raise prices and reduce innovation. CFIUS should consider these issues because ultimately, the effect of this concentrated market power would both affect the control of critical technologies and food security. Finally, President Obama’s Executive Order on competition policy directs agencies “with authorities that could be used to enhance competition” to “use those authorities to promote competition.” If CFIUS approved the proposed ChemChina-Syngenta merger it would erode competition; the best way to promote competition is to prevent mergers that exacerbate economic consolidation.

**Proposed Merger Could Distort Global Trade**

The proposed takeover of Syngenta by a Chinese state-owned company would create a unique conflict of the Chinese government both approving and manufacturing seeds and agrichemicals, giving the post-merged ChemChina-Syngenta a significant commercial edge over its rivals in accessing the Chinese market. China’s seed market is the second largest in the world but the largest international seed companies only capture 20 percent of the Chinese market.

China’s buying power with a population of 1.38 billion people has significant capacity to influence what is produced here. In 2013, Shuanghui International Holdings, Ltd. (now known as WH Group) purchased Smithfield Foods (Smithfield) for $4.7 billion, representing the largest purchase of a U.S. firm by a Chinese company to that point. Smithfield is the largest pork processor and hog producer in the United States. In 2015, Smithfield’s exports to China rose 50 percent and controlled nearly all U.S. pork exports to China (97 percent).

While China is in the process of modifying laws and regulations governing biotechnology, many biotech food crops have not yet been approved for cultivation. At times, China’s regulatory approval process has

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138 Wooten (2016).
140 Xinhua (September 7, 2013).
hindered U.S. grain and oilseed exports.\textsuperscript{142} ChemChina is a state-owned enterprise of China and, as such, does not act in economically rational ways. Should Syngenta get preferential treatment after its acquisition by ChemChina, this could dramatically impact the competitiveness of the agriculture biotechnology sector.

Syngenta suggested that the company did not anticipate favored regulatory treatment from the Chinese government and even projected that the deal would pave the way for the approval of other U.S. crops and biotechnologies.\textsuperscript{143} But it admitted that the deal would give Syngenta “a lot of opportunities to totally transform the landscape for agriculture in China.”\textsuperscript{144} The proposed deal could give exports grown from Syngenta seeds preferential access to the China market and reinforce a barrier to crop exports grown from other companies’ seeds.

The Chinese government provides a host of benefits to its domestic enterprises that make them more competitive than international firms that operate without state subsidies. These firms receive below-market interest rate loans from state-owned banks and often the debt from these loans is forgiven or significantly written down. China’s policy to ensure food self-sufficiency provides a subsidy for domestic food processing, meatpacking and agricultural production. Additionally, China’s protection and manipulation of its currency provides a benefit to Chinese firms.

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The cross-border acquisition of Syngenta by ChemChina poses an unacceptable national security risk, undermines the security and resiliency of the U.S. food supply, creates trade barriers and uncertainty, and further consolidates an already concentrated market. CFIUS should reject the proposed ChemChina purchase of Syngenta.

Sincerely,

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Wenonah Hauter  
Executive Director  
Food & Water Watch

Roger Johnson  
President  
National Farmers Union

\textsuperscript{142} Bunge (March 24, 2016).
\textsuperscript{143} Bunge (March 23, 2016).
\textsuperscript{144} Bunge (February 4, 2016).