



CASE STUDY

Crime: Trade Secret Theft

WHAT HAPPENED

Haitao Xiang was employed by Monsanto and its subsidiary, The Climate Corporation (TCC), from 2008 to 2017, where he worked as an imaging scientist. On or about June 2015 through November 2015, Xiang sent a series of communications to individuals who were located in the People's Republic of China (PRC). During the course of the communications, Xiang asked to be recruited into the Nanjing Institute of Soil Science, Chinese Academy of Sciences (CAS), in the PRC. Xiang inquired about the Hundred Talents Program (HTP) and the application process for employment in the PRC. Between March 26, 2014 and June 9, 2017, Xiang copied, duplicated, transmitted, and downloaded the Nutrient Optimizer from Monsanto systems.

In February 2016, Xiang submitted his application for the HTP. In accompanying documents and communications, Xiang described the skills and work he would be able to offer the Nanjing Institute of Soil Science, CAS. His descriptions included details and abilities that could only be accomplished through the use of the digital farming software platform and the Nutrient Optimizer. On March 14, 2016, Xiang conducted the following Google searches on a Monsanto computer: "company information to the third party," "as evidence to accuse me," "can use it to against me in future," "I don't want it to be an evidence," and "to be a piece of evidence that."

On or about June 9, 2017, Defendant Xiang signed and acknowledged that among other things: he did not possess or fail to return any devices, records, data, notes, reports, proposals, lists, correspondence, specifications, drawings, blueprints, sketches, materials, equipment, and any other documents or property, or reproductions of any and all aforementioned items belonging to Monsanto and TCC, its subsidiaries, affiliates, and or successors.

After completing his exit interview with Monsanto, between June 9 and 10, 2017, Xiang copied and downloaded the Nutrient Optimizer to a Micro SD Card, and drove from St. Louis, Missouri to Chicago O'Hare International Airport to catch his same day flight. While he was waiting to board his flight, federal officials conducted a search of Xiang's person and baggage. Investigators later determined that one of Xiang's electronic devices contained copies of the Nutrient Optimizer. Xiang continued on to China where he worked for the Nanjing Institute of Soil Science, CAS. Xiang was arrested when he returned to the United States in November 2019.

Haitao Xiang pleaded guilty to conspiracy to commit economic espionage and was sentenced to 29 months in prison followed by three years of supervised release and a \$150,000 fine.

INDICATORS

Access Attributes: Xiang used his access to obtain information despite resigning and completing the company's exit interview.

Technical Activity: Xiang maintained a Micro SD card with sensitive information on him while traveling to the PRC.

Foreign Influence and Preference: Xiang was a citizen of PRC and actively sought out recruiters to join the HTP.

Haitao Xiang

- Haitao Xiang was age 44 at the time of sentencing
- Haitao Xiang pleaded guilty to one count of conspiracy to commit economic espionage
- From 2008 to June 2017, Haitao Xiang was a citizen of the People's Republic of China (PRC) and a legal permanent resident of the United States



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IMPACT

- “The defendant took advantage of living and working in the United States to steal a valuable trade secret for the benefit of PRC entities,” said Assistant Attorney General Kenneth A. Polite, Jr. of the Justice Department’s Criminal Division. “This type of theft threatens employers large and small in every state, and it imperils our economic competitiveness as a nation. Individuals entrusted with valuable trade secrets should be on notice that if they abuse that trust – especially for the benefit of foreign nations – we will hold them accountable.”
- “Xiang conspired to steal an important trade secret to gain an unfair advantage for himself and the PRC,” said Assistant Attorney General Matthew G. Olsen of the Justice Department’s National Security Division. “The victim companies invested significant time and resources to develop this intellectual property. Economic espionage is a serious offense that can threaten U.S. companies’ competitive advantage, and the National Security Division is committed to holding accountable anyone who steals trade secrets to benefit a foreign government.”

ADDITIONAL INFO

Monsanto and TCC had the following measures to protect the Nutrient Optimizer from unauthorized use:

- Maintained perimeter security to restrict physical access to facilities
- Maintained video security cameras monitored by security specialists both inside and outside facilities
- Employees’ requirement to execute non-disclosure agreements
- Employees’ requirement to complete annual training on the protection and confidentiality of sensitive proprietary, trade secret, copyright, and patent materials and on business standards of conduct including, how to properly handle proprietary information and trade secrets
- Employee requirement to wear visible access badges
- Access to computer systems required an assigned log-in and password
- Computers displayed a Security Banner advising employees that the computer system was subject to monitoring
- Dual (two-factor) authentication; Virtual Private Network (VPN); and hard drive encryption
- Limited access to proprietary information and trade secrets only to authorized persons
- Directed employees to use a data classification policy to classify, label, and store all data
- Communicated policies on the use and handling of confidential and proprietary information during training, in employee handbooks, through verbal warnings at company meetings, and on signs or banners posted in the workplace
- Labeled documented research with caveats to indicate proprietary, trade secret, or copyright

China recruits science and technology professors, researchers, students, and others — regardless of citizenship or national origin to apply for talent plans. China will let people with existing jobs in the United States participate in talent plans part-time so they can maintain: their access to intellectual property, trade secrets, pre-publication data and methods; U.S. funding for their research; and to steal foreign technologies needed to advance China’s national, military, and economic goals. Talent plan participants receive offers of financial, personal, and professional benefits in exchange for their efforts. China’s talent plans have successfully recruited participants around the world to work on key programs like military technologies, nuclear energy, wind tunnel design, and advanced lasers.

Consider the following question:

What countermeasures can companies utilize to help prevent and detect participants of HTP?

Resources for further exploration:

[Insider Threat Indicators Job Aid:](https://www.cdse.edu/Portals/124/Documents/jobaid/insider/INTJ0181-insider-threat-indicators-job-aid.pdf)

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[FBI Economic Espionage National Awareness Campaign:](https://www.fbi.gov/news/stories/economic-espionage)

(<https://www.fbi.gov/news/stories/economic-espionage>)

[Insider Risk Mitigation Programs Food and Agriculture Sector:](https://www.cdse.edu/Portals/124/Documents/jobaid/insider/Insider-Risk-Food-and-Ag.pdf)

(<https://www.cdse.edu/Portals/124/Documents/jobaid/insider/Insider-Risk-Food-and-Ag.pdf>)

Supporting Through Reporting!

Contact the appropriate POC to report any observed potential risk indicators:

Name: _____

Agency/Department: _____

Title: Supervisor/Security Officer/ITP

Senior Official/ITP Manager