



Agricultural Economic Espionage A Growing Threat

You and the FBI: Sowing the seeds of cooperation to defeat the IP threat

You are ultimately responsible for protecting your own intellectual property. Congress has continually expanded and strengthened criminal laws for violations of intellectual property rights to protect innovation; however, you need to take reasonable steps to protect your intellectual property and products, and document those measures. These laws include:

Title 18 U.S.C., Section 1831 – **Economic Espionage** is (1) whoever knowingly performs targeting or acquisition of trade secrets to (2) knowingly benefit any foreign government, foreign instrumentality, or foreign agent.

Title 18 U.S.C., section 1832 – **Theft of Trade Secrets** is (1) whoever knowingly performs targeting or acquisition of trade secret or intends to convert a trade secret to (2) knowingly benefit anyone other than the owner. This is commonly referred to as *Industrial Espionage*.

You can help the FBI with thwarting Economic Espionage and Theft of Trade Secrets

The FBI welcomes any information you have that could assist with disrupting possible Agricultural IP theft. Below are questions that will help the FBI understand the threat and assist with ongoing investigations. If you can provide answers, please contact your local FBI Strategic Partnership Coordinator or FBI field office.

- What information and technology related to the agricultural and biotechnology industries are foreign competitors targeting from US businesses, academic and research entities?
- What are technology gaps of foreign competitors? Are they lacking R&D, manufacturing, production, or operational capability?
- How do US agricultural companies collaborate with US academic and government research entities? What agricultural research at US companies and academic institutes is supported by federal grants? What agricultural research at US academic and government entities is considered proprietary?
- How do foreign competitors keep tabs on US research activity and science experts at US companies and academic institutes?
- Which foreign competitors do US companies find most aggressive in pursuing US agricultural information and technology? What kind of compromise and penetration activities related to theft of sensitive research and commercial business information has US companies experienced over the past years?

Protecting
Intellectual
Property

Keep your competitive edge.



Contact Information

FBI investigations indicate economic espionage and trade secret theft against US agricultural and biotechnology companies and institutes is on the rise. Over the past two years, foreign actors have targeted and collected against US companies, universities and government research facilities for agricultural information concerning plant genome, new variety development, breeding programs and advanced manufacturing processes. The FBI continues to lead efforts to mitigate, neutralize and disrupt the theft of US agricultural intellectual property and trade secrets that could be used by foreign governments or foreign companies to gain an unfair economic advantage.

Agricultural Intellectual Property and the Threat

Agricultural Intellectual Property (IP) includes a company's trade secrets, proprietary information, and research. This ranges from farming equipment to genetically-modified seeds, which if stolen could result in lost revenue, lost employment, damaged reputation, lost investment for research and development (R&D), and interruption in production.

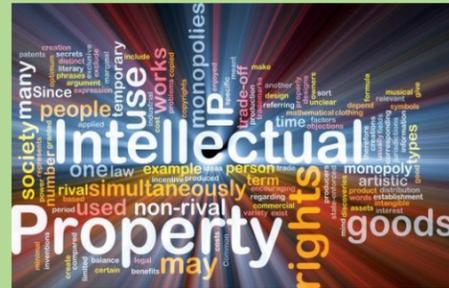
Who Might Steal Your Intellectual Property?

- Domestic and foreign commercial rivals
- Domestic and foreign start-up companies
- Foreign Intelligence Officers (spies)
- Disgruntled employees (insider threat)
- Organized criminals

If your company has a unique product or process, you may likely be targeted; therefore you should protect it, along with the programs and systems that make the company successful. This is especially relevant if your company:

- Has a technological edge and employees with access to it could be targeted.
- Has developed a process to manufacture an item at lower cost than your competition.
- Is negotiating with another company, especially foreign-based because the negotiators and negotiation strategy may be targeted.

If your company has invested time and resources developing a product or idea—protect it!



Best Practices to protect Agricultural IP

- Assess your company's information security vulnerabilities and fix or mitigate the risks associated with those vulnerabilities.
- Clearly identify and safeguard critical information/IP and mark it accordingly (COMPANY PROPRIETARY, PROPIN, CONFIDENTIAL, etc.)
- Do not store proprietary information vital to your company on any device that connects to the Internet.
- Use up-to-date software security tools. Many firewalls stop incoming threats, but do not restrict outbound data. Competitive intelligence hackers try to retrieve data stored on your network.
- Educate employees on spear phishing email tactics. Establish protocols for reporting and quarantining suspicious emails.
- Ensure your employees are aware of and are trained to avoid unintended disclosures.
- Remind employees of security policies on a regular basis through active training and seminars. Use signs and computer banners to reinforce security policies.
- Document employee education and all other measures you take to protect your intellectual property.
- Ensure human resource policies that specifically enhance security and company policies are in place. Create clear incentives for adhering to company security policies.

Your local FBI Strategic Partnership Coordinators (SPC) can provide a vulnerability self-assessment tool, threat awareness briefings, brochures, and other tools to assist your company. If you believe your company may be or is going to be a victim of Intellectual Property Theft, contact your SPC or the National Intellectual Property Rights Coordination Center.

**Investigator
s cannot act
if they are
not aware of
the problem.**

The FBI will minimize the disruption to your business, and safeguard your privacy and your data during its investigation. Whenever possible, the FBI will seek protective orders to preserve trade secrets and business confidentiality.

Agricultural IP theft examples

Early reporting to the FBI will allow for the most thorough investigation possible and potentially mitigate or thwart the loss of your IP. The following Agricultural- related Economic Espionage case studies demonstrate the importance of early reporting and subsequent collaboration with the FBI.

Case Examples:

Case 1: Chinese National Arrested for Conspiring to Steal Trade Secrets of Hybrid Corn Seeds

(Source: DOJ Press Release dated December 12, 2013)

In December 2013, the FBI announced the arrest of Chinese national Mo Hailong (aka Robert Mo) for conspiracy to steal trade secrets.

- Mo Hailong was employed as the Director of International Business of the Beijing Dabeinong Technology Group Company, which is part of DBN Group. DBN Group is believed to be a Chinese conglomerate with a corn seed subsidiary company, Kings Nower Seed.
- Mo Hailong and others are alleged to have stolen valuable inbred corn seed from production fields in Iowa and Illinois. This "inbred" or "parent" line of seed constitutes valuable intellectual property of a seed producer.
- After stealing the inbred corn seed, the conspirators attempted to covertly transfer the inbred corn seed to China.
- The investigation was initiated when Dupont Pioneer security staff detected Mo Hailong and his conspirators digging in test fields, and alerted the FBI.



Please contact your local FBI Strategic Partnership Coordinator, who is specially-trained in Economic Espionage and is available to assist you with mitigating threats to your organization and intellectual property.



Case 2: Agricultural Scientists Charged with Stealing Proprietary Rice Seeds

(Source: FBI Press Release dated December 12, 2013)

In December 2013, Chinese nationals, Zhang Weiqiang and Yan Wengui were charged with conspiracy to steal trade secrets. The victim in the case—identified in court records as "Company A" had invested approximately \$75 million in patented technology used to create a variety of seeds containing recombinant proteins. The company has an extensive intellectual property portfolio of more than 100 issued and pending patents and exclusive licenses to issued patents. Zhang and Yan were charged after US Customs and Border Protection agents found stolen seeds in the luggage of a group of visitors from China preparing to board a plane to return home in 2013. While in the US, the group had visited various agricultural facilities and universities in the Midwest, as well as the Dale Bumpers National Rice Research Center in Stuggart, Arkansas.

- Zhang, worked as an agricultural seed breeder for Company A since 2008.
- Yan worked for the US Department of Agriculture as a rice geneticist at the Dale Bumpers National Rice Research Center.
- Zhang and Yan arranged for the Chinese delegation to visit the US in 2013. Previously, the two had traveled to China at the same time in 2012 to visit a Crops Research Institute. Some of the people they met in China were members of the Chinese delegation that visited the United States in 2013.
- Seeds similar to what were found in the delegation's possession were also found in Zhang's residence.