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Red Teaming — Agroterrorism

The Threat is Real - Can You Live Without Beef?

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The United States is exceedingly vulnerable to agricultural bioterrorism. Abundant food supplies are taken for granted, and thus it is difficult for most Americans to imagine a world in which the availability of food radically changes. Yet a simple, unclassified, Red Team exercise reveals the real threat to our beef industry. Steps can and must be taken to defend America against this threat.

Consider the implications of a life without beef; no burgers, no tacos, no steaks. Now imagine all of the second order effects of life without any beef; no jobs for restaurant employees, no restaurants, no jobs for the industries that support restaurants, and no jobs for supermarket employees, or meat packers, or truckers... the list goes on and on. The threat from terrorists on America's livestock industry is real and yet most Americans do not even know it exists. A simple Red Team exercise reveals the threat.

Red Teaming is the practice of viewing a problem from an adversary or competitor's perspective, also known as alternative analysis. The goal of most Red Teams is to enhance decision making, either by specifying the adversary's preferences and strategies or by simply acting as a devil's advocate.¹⁵ Red Teaming serves many purposes, the greatest of which are exposing vulnerabilities and allowing for corrective action; ultimately it allows an organization to be proactive in deterring or defeating future threats. It is well known that terrorists follow a simple seven-step planning cycle. Walking through that planning cycle and using alternative analysis reveal the threat to America from agroterrorism.

America is at war with terrorist enemies who are intent on attacking our homeland and destroying our way of life.¹⁶ As the national strategy to counter this threat has evolved over the past 23 years, the most

glaring vulnerability which has not been protected or hardened is America's agricultural industry. Aspirations of al-Qaeda have been revealed in clues recovered from abandoned safe houses and caves following their abandonment when U.S. troops invaded in the wake of the Sept. 11, 2001 attacks. In addition to the cell phones and other operational supplies there were thousands of documents and computer records. Included in this trove of information were Arabic translations of several hundred pages of U.S. agricultural documents.¹⁷ One should not be astonished that al-Qaeda or any other determined terrorist organization would be imaginative enough to contemplate ways of attacking U.S. food industries. Indeed, a relevant article reminds its readers, "The history of warfare is full of examples of burned crops, poisoned wells, and slaughtered herds."¹⁸

Due to the nature of asymmetrical warfare, terrorists must carefully plan their operations to minimize risk and maximize their potential for success. Therefore, they must capitalize on their opponents' weaknesses and circumvent their strengths.¹⁹ To that end, terrorist cells extensively survey potential targets and meticulously plan out operations, focusing particularly on the intelligence gathered from reconnaissance.²⁰ The planning cycle is valid for traditional hierarchically organized groups, as well as the decentralized "network" type organizations.²¹ The typical stages of planning a terrorist operation are as follows:

- I. Broad Target Selection
- II. Intelligence and Surveillance
- III. Specific Target Selection
- IV. Pre-attack Surveillance and Planning
- V. Attack Rehearsal
- VI. Actions on the Objective
- VII. Escape and Exploitation

17 Peters, Katherine. "Officials Fear Terrorist Attack on U.S. Food Supply." Government Executive. June 2003. <http://www.govexec.com/defense/2003/06/officials-fear-terrorist-attack-on-us-food-supply/14278/>, (accessed 11 March 2010).

18 Ibid.

19 A Military Guide to Terrorism in the Twenty-First Century. 15 August 2005, TRADOC DCSINT No. 1. <http://www.hsdl.org/?view&did=457464>, (accessed 11 March 2010), B-1.

20 Ibid.

21 Ibid.

In Broad Target Selection, there is collection of information by the terrorists on a large number of potential targets typically, through open source and general information collection. Stories from newspapers and other media are used as are Internet searches which provide pictures, blueprints, and video information.²² The number of preliminary targets that can be screened is limited only by the capabilities of the group to collect information from sympathizers and open sources. The American Beef/Cattle industry is a fairly quick target in the broad selection. "Beef. It's What's for Dinner," proclaims the National Cattleman's Beef Association, and American eating habits bear that out. Government and industry figures estimate as many as 78 million meals including beef are served daily in the United States.²³

Targets that are considered vulnerable, and which would further the terrorist organization's goals, are selected for the next step: Intelligence and Surveillance. In this step, the terrorists begin to eliminate possible successes and begin to focus on the most probable. This is one of the most important areas of information for attack site selection, since the intent is to bypass and avoid security measures.

Agriculture has several characteristics that pose unique problems for managing the threat of terrorism. The disparate geographical distribution of unsecured agricultural production environments has generally received less attention than counter-terrorism and homeland security efforts.²⁴ And yet, Americans still spent in excess of \$175 billion at fast food restaurants in 2011, an increase of 3% from the previous year.²⁵ If the livestock supply chain is disrupted, the impact on our society is mind boggling; not only would people not be able to purchase beef, but the cascading effects would be profound. Almost every employee within that \$175 billion fast food industry would lose his

22 A Military Guide to Terrorism in the Twenty-First Century, B-1.

23 Knickerbocker, Brad. "Mad Cow Weighs Down a \$175 Billion Industry." Christian Science Monitor. 05 January 2004. <http://www.csmonitor.com/2004/0105/p02s01-usgn.html>, (accessed 11 March 2010).

24 Monke, Jim. Agroterrorism: Threats and Preparedness. CRS Report for Congress. 13 August 2004. http://digital.library.unt.edu/ark:/67531/meta-crs5731/m1/1/high_res_d/RL32521_2004Aug13.pdf, (Accessed 11 March 2010).

25 Jargon, Julie. "Wendy's Stages a Palace Coup." Wall Street Journal. 21 December 2011. <http://online.wsj.com/article/SB10001424052970203733304577102972533796622.html>, (accessed 11 March 2010).

or her job. Shippers of beef would grind to a halt, meat packing plants would close, and suppliers of restaurant equipment and supplies would shut down.

With this intelligence, terrorists move to the next step: Specific Target Selection. If the target is the American Beef/Cattle industry, where would one find lots of cattle? Naturally, the answer is in feedlots (pardon the pun). How one would find out about feedlots merely requires a simple Google search of "feedlots and magazines" returns the result: www.FeedlotMagazine.com. Feedlot magazine tells a reader that it is a billion dollar industry (this serves to confirm the target selection) and that feedlots are concentrated in the Midwest. Another simple Google search of Midwest agricultural websites brings one to the Nebraska Department of Agriculture website, wherein there is a publication for Nebraska Cattle Feeders. The beef industry is the single largest in Nebraska, with over 1,940,000 cows in the state.²⁶

This then advances planning to the next step: Pre-attack Surveillance and Planning. Members of the actual operational cells would begin to appear during this phase. Either trained intelligence and surveillance personnel or members of the terrorist cell trained for the operation usually conduct this phase. Consequently, the level of intelligence tradecraft and operational competency correspondingly increases. In this phase, terrorists gather information on the target's current patterns over time, usually from days to weeks. It allows the attack team to confirm the information gathered from previous surveillance and reconnaissance activities. The areas of concern are essentially the same as in Phase II, but with greater focus based upon evaluating the planning conducted thus far.²⁷ Using open source websites, specific targets were finalized, delivery methods were tested, and the type of weapon or attack was selected.

Because our enemies search for and use information that is available on the Web or from published sources, I will not provide details of the specific targets that were selected nor the criteria that were used to do so. Likewise, I will not provide

26 Nebraska Cattle Feeders Directory. Nebraska Department of Agriculture. http://www.agr.state.ne.us/cattle_feeders/index.html, (accessed 11 March 2010).

27 A Military Guide to Terrorism in the Twenty-First Century, Appendix B.

15 Red Teaming definition. Glossary. RedTeamJournal.com, (accessed 11 March 2010).

16 National Strategy for Homeland Security. (Homeland Security Council, October 2007), <https://www.hsdl.org/?view&did=479633>, (accessed 11 March 2010), 1.

details of the delivery methods selected because I refuse to provide a cookbook for someone who wishes to destroy our way of life. Suffice it to say that the Red Team example had a high probability of success with both Actions on the Objective and Escape and Exploitation.

I will, however, detail the type of weapon or attack selected: foot-and-mouth disease (FMD). If FMD were introduced in the United States via its unsecured farms, ranches, feedlots, etc., there would be no recourse but to institute the mass slaughter of millions of animals, in addition to the safe disposal of their infected carcasses.²⁸ Such an event would likely halt or even cripple all sales, both domestic and international, of any U.S. meat products for months or even years.²⁹ Research estimates extrapolated from the 2001 FMD outbreak in the United Kingdom project that the cost to taxpayers of such an attack on the U.S. industry could amount to as much as \$60 billion.³⁰ Where did I come up with such a nefarious method of attack? From the very same official Nebraska publication mentioned previously, where it addresses “Welcoming International Visitors to Your Ranch” and “The Threat: Foot-and-Mouth Disease.”³¹

Foot-and-mouth disease (FMD) is a highly virulent and contagious disease that manifests in the form of fever and blister-like lesions followed by consumption of the tongue, lips, mouth, teats, and hooves.³² FMD affects not only cattle and swine, but sheep, goats, deer, and other cloven-hoofed ruminants as well.³³ There are seven known types and more than sixty subtypes of the FMD virus. Immunity to (or vaccination to) one type does not protect an animal against other permutations.³⁴ Some people will counter with the fact that this country has been free of FMD since

28 “Agroterrorism—Why We’re Not Ready: A Look at the Role of Law Enforcement.” NIJ Research for Policy. December 2006. www.nij.gov/pubs-sum/214752.htm, (accessed 11 March 2010).

29 Ibid.

30 Ibid.

31 “Foot-and-Mouth Disease International Travel Information.” Nebraska Department of Agriculture. http://www.agr.ne.gov/animal/foot_mouth_disease_travel.html, (accessed 11 March 2010).

32 “Foot-and-Mouth Disease.” APHIS Factsheet. February 2007. http://www.aphis.usda.gov/publications/animal_health/content/printable_version/fs_foot_mouth_disease07.pdf, (accessed 11 March 2010).

33 Ibid.

34 Ibid.

1929. While that fact is correct, it does not diminish the reality that we are facing an enemy who has both the desire and capability to carry out such an attack, nor does it diminish the fact that FMD has already been used successfully against another nation that had eradicated FMD for more than 60 years.

The first report of an FMD outbreak occurred in March 1997, originating in Taiwan.³⁵ This disease became an epidemic within six weeks and led directly to the extermination of eight million pigs. As a result, Taiwan’s pork exports ground to a halt.³⁶ Reportedly, the FMD virus was carried by a pig that had been sent from Hong Kong, which served to reinforce the notion that China had conducted agroterrorism against the island nation.³⁷ The economic aftermath resulted in the expenditure of \$4 billion to exterminate the virus, in addition to the loss of \$15 billion in “indirect losses from trade embargoes.”³⁸ The bottom line is that livestock animals in this country are also highly susceptible to FMD viruses.

If an outbreak were to occur in the United States, this disease could spread rapidly to all sections of the country by routine livestock movements unless it were detected early and eradicated immediately. If FMD were to spread unchecked, the economic impact could reach billions of dollars in the first year.³⁹ In addition, deer and other susceptible wildlife populations could become infected and potentially serve as a source for re-infection of livestock. While vaccines for FMD are available, the vaccines must be matched to the specific type and subtype of virus causing the outbreak.⁴⁰ Therefore, the simplistic answer of “we will just vaccinate” is not so simple in practice.

One of the most frustrating aspects of Red Teaming is having the knowledge that the terrorists we face have both the motivation and the technical knowledge to handle contagious biological agents. A perfect open source example is the arrest, trial, and

35 Parker, Henry. *Agricultural Bioterrorism: A Federal Strategy to Meet the Threat*. McNair Paper 65. (Washington, D.C.: Institute for National Strategy Studies, National Defense University, 2002), 14-15.

36 Ibid, 14-15.

37 Ibid, 14-15.

38 Ibid, 14-15.

39 “Foot-and-Mouth Disease.” APHIS Factsheet.

40 Ibid.

conviction of Aafia Siddiqui. Siddiqui, a 36-year-old Pakistani woman, resided in the United States for more than a decade (from 1991 until June 2002), and earned degrees from the Massachusetts Institute of Technology (B.S. in Biology) and Brandeis University (Ph.D. in Cognitive Neuroscience). She subsequently returned to the United States a mere six months later on 25 December 2002, then departed again on Jan. 2, 2003.⁴¹ A few years later, Afghanistan National Police (ANP) officers observed Siddiqui outside the governor’s compound in the country’s Ghanzi Province on July 17, 2008.⁴² Regarding her as suspicious, the ANP officers then questioned her and searched her handbag.⁴³ Their search produced several documents on the creation of explosives, as well as other notes that discussed various ways to attack “enemies,” including the use of underwater bombs, and gliders.⁴⁴ Siddiqui also possessed a computer thumb drive that contained correspondence referring to specific “cells,” “attacks” by certain “cells,” and “enemies.”⁴⁵ Additionally, Siddiqui was in possession of sealed substances contained within bottles and glass jars.⁴⁶

Washington has enacted laws, but not enough has changed to decrease the likelihood or potential for this type of terrorist attack to take place on U.S. soil. We do not need more government; we need more vigilance. Local communities in livestock producing areas need to be educated about the threat, and local law enforcement needs to be alert to preparatory acts even though many of them may not be criminal in and of themselves. However, for years, local law enforcement has trained to be on the lookout for preparatory acts for crimes such as a conspiracy to commit a bank robbery, and those very same preparatory acts are investigated even though they are not criminal in and of themselves. Feedlot

41 “Aafia Siddiqui Indicted for Attempting to Kill United States Nationals in Afghanistan and Six Additional Charges.” DOJ Press Release. 02 September 2008. <http://www.justice.gov/opa/pr/2008/September/08-nsd-765.html>, (Accessed 11 March 2010).

42 “Aafia Siddiqui Arrested for Attempting to Kill United States Officers in Afghanistan.” DOJ Press Release. 04 August 2008. <http://www.justice.gov/opa/pr/2008/August/08-nsd-687.html>, (accessed 11 March 2010).

43 Ibid.

44 Ibid.

45 Ibid.

46 Ibid.

owners also need to appreciate the threat, and while still being innovative, they should be encouraged to update their websites so that items such as wind speed, humidity, and other weather conditions are not open source. While such local information is important to shippers, it can easily be relayed to truckers without being made available to potential terrorists. Feedlot owners with lots next to major interstate highways or other roadways should also consider using inexpensive methods such as snow fences (as seen in Wyoming and Colorado) to block surveillance and foreign objects. Finally, local communities and local law enforcement should report and respond to all suspicious activities. Only by remaining ever vigilant can we disrupt the terrorist planning cycle and thwart operations. While the threat to America’s livestock industry is real, there are opportunities to be proactive against the threat to protect and maintain our way of life. It is in this way that the United States can continue to remain the home of the brave and the land of the free.