



# Strategic Partnership Program Agroterrorism (SPPA) Initiative

Second Year Status Report  
July 2006 – September 2007

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## I. Executive Summary

To assist in protecting the nation's food supply, the Federal Bureau of Investigation (FBI), Department of Homeland Security (DHS), U.S. Department of Agriculture (USDA), and the Food and Drug Administration (FDA) have developed a joint assessment program, the Strategic Partnership Program Agroterrorism (SPPA) Initiative. The purpose of this initiative is to conduct a series of assessments of the food and agricultural sector in collaboration with private industry and State volunteers.

These assessments support the requirements for a coordinated food and agriculture infrastructure protection program as stated in the National Infrastructure Protection Plan (NIPP), Sector Specific Plans (SSP), National Preparedness Guidelines (released in 2007), and Homeland Security Presidential Directive 9 (HSPD-9), *Defense of US Agriculture and Food*.

SPPA assessments are conducted on a voluntary basis between one or more industry representatives for a particular product or commodity, their trade association(s), and Federal and State Government agricultural, public health and law enforcement officials. Together, they conduct a vulnerability assessment of that industry's production process using the CARVER + Shock tool. The acronym "CARVER" stands for the factors assessed: **C**riticality, **A**ccessibility, **R**ecuperability, **V**ulnerability, **E**ffect, **R**ecognizability, and Shock.

As a result of each assessment, participants identified individual nodes, or process points that are of highest concern, protective measures and mitigation steps that may reduce the vulnerability of these nodes, and research gaps/needs. Discussions of mitigation steps and good security practices were general in nature, focusing on physical security improvements for food processing facilities and biosecurity practices and disease surveillance for livestock and plants.

Participants also identified research gaps and needs during each assessment. The research need most often identified during each assessment was enhanced scientific capabilities to provide an early awareness of an event, because these capabilities would also permit a rapid response thereby reducing the impact of an event. Other commonly identified gaps and needs included developing a better understanding of threat-agent characteristics and improved detection methodologies. Most assessments also identified improved communications between government and industry during an emergency as a key gap.

A year one status report was released during July 2006 reviewing the first 12 SPPA assessments. This year two report includes an additional 19 assessments. To date, the CARVER + Shock tool has produced useful distinctions between nodes of higher and lower concern for each food or agriculture production process assessed. The tool has also shown

commonalities across food and agricultural industries that make them more vulnerable to attack, and generic protective measures or mitigation strategies that could be beneficial to the industries assessed.

## **II. Background**

The Strategic Partnership Program Agroterrorism (SPPA) Initiative is a public-private cooperative effort established by the Federal Bureau of Investigation (FBI), Department of Homeland Security (DHS), U.S. Department of Agriculture (USDA), and the Food and Drug Administration (FDA), in partnership with State and industry volunteers. The intent of the initiative is to collect the necessary data to identify sector-specific vulnerabilities, develop mitigation strategies, identify research gaps and needs, and increase awareness and coordination between the food and agriculture government and industry partners. To accomplish this, the SPPA brings together these Federal, State, local, and industry partners to collaboratively conduct a series of assessments of food and agricultural industries.

These assessments support the requirements for a coordinated food and agriculture infrastructure protection program as stated in the National Infrastructure Protection Plan (NIPP), Sector Specific Infrastructure Protection Plans (SSP), and Homeland Security Presidential Directive-9 (HSPD-9), *Defense of US Agriculture and Food*.

The NIPP, Food and Agriculture SSPs, and HSPD-9, all call for Federal, State, and industry partners to work together to protect the nation's infrastructure. Specifically, HSPD-9 establishes a national policy to defend the agriculture and food system against terrorist attacks, major disasters, and other emergencies. HSPD-9 directs the government to work with industry to: identify and prioritize sector-critical infrastructure and key resources; establish protection requirements; develop awareness and early warning capabilities to recognize threats; mitigate vulnerabilities at critical production and processing nodes; enhance screening procedures for domestic and imported products; and enhance response and recovery procedures.

## **III. Program Overview**

Each SPPA assessment lasts approximately 3 days and consists of a team of 20 to 30 participants from Federal, State and local agricultural, food, public health, and law enforcement agencies, food and agricultural companies, and their trade associations. In preparation for the assessment, the Federal host (USDA or FDA) collaborates with the participants to ensure they are knowledgeable on the assessment tool and that the plans for the assessment are on-target.

During the assessment, government participants typically tour one or more facilities or production sites related to the industry being assessed. These tours aid participants in understanding the process flow prior to conducting the tabletop portion of the assessment. Following the tour(s), all participants conduct the CARVER + Shock assessment, which also includes informational briefings and discussions of protective measures or mitigation steps and research needs.

Over the course of 31 assessments completed to date, the CARVER + Shock tool has proven capable of producing a useful distinction between nodes of higher and lower concern within each food or agriculture process under consideration. The CARVER + Shock tool has performed well, considering the dynamics of 20 to 30 people with disparate backgrounds trying to achieve consensus. The identification of nodes of higher concern and trends related to these nodes transfers well from assessment to assessment.

At each assessment, mitigation recommendations and good security practices are proposed and discussed. Mitigation recommendations have been very general in nature due primarily to the fact that multiple companies and facilities/sites are represented at each assessment. Mitigation recommendations may not, and are not, expected to apply universally to all facilities/sites. In general, the recommendations have focused on physical security improvements, such as countermeasures that can be imposed or bolstered at highly accessible or vulnerable nodes. These may vary by facility or industry and depend upon the production process point, but may include cameras, additional supervision, restricting access to certain areas of a facility, color-coded uniforms or bump caps to designate a work area, limiting of personal items in certain areas, use of access cards, and process design changes.

Participants also identify research gaps and needs during each assessment. Recurring themes include developing a better understanding of threat-agent characteristics, development or improvement of detection methods for threat-agents of concern, and development or dissemination of models (or the results) related to the impact of a food or agricultural terrorism event. Regarding threat-agents, the industry participants were most interested in how the agents survive in particular products or commodities and how process changes may affect the toxicity or infectivity of certain threat-agents.

The topic of models related to a terrorism event was a common discussion while assessing the Criticality, Recuperability, and Shock elements of CARVER + Shock. Evaluating the economic impact of an attack on a single industry or company within the agriculture and food sector has been difficult to determine and unrealistic because industries within the sector are extremely interdependent. Additionally, the public sentiment following a terrorist event targeting an industry within the agriculture and food sector was difficult for assessment participants to gauge. In order to better assess the Recuperability element, estimates of the time or method to restore consumer confidence

following various event scenarios would assist future threat assessments and was of great interest to participants at many SPPA assessments. Understanding the economic ramifications of an event would also aid in assessing the Criticality and Shock factors because both of these CARVER factors are scored partly based on economic impact.

#### **IV. Assessment Status**

Both food and agriculture Sector Specific Agencies, FDA and USDA, proposed lists of products or commodities within their jurisdiction that could be assessed for the SPPA program (See Table 1.) Trade associations facilitated interactions among their membership and the government participants. The order and extent of products or commodities assessed to date are based upon industry and State volunteers, as well as seasonal considerations. The list of assessments conducted during the second year of the program (July 06 to September 07) is presented in Table 2 and a list of confirmed year three assessments is presented in Table 3. Additional segments of the food and agriculture sector are being considered for 2008.

NOTE: A list of year one (September 05 to June 06) completed assessments is presented in Appendix A.

**Table 1. USDA and FDA Site Visits Initially Proposed**

<b>USDA Proposed Site Visits</b>	<b>FDA Proposed Site Visits</b>
<p><u>Production Agriculture</u></p> <ul style="list-style-type: none"> <li>• Aquaculture production facility</li> <li>• Beef cattle feedlot</li> <li>• Cattle stockyard/auction barn</li> <li>• Citrus production facility</li> <li>• Corn farm</li> <li>• Dairy farm</li> <li>• Grain elevator and storage facility</li> <li>• Grain export handling facility</li> <li>• Poultry farm</li> <li>• Rice mill</li> <li>• Seed production facility</li> <li>• Soybean farm</li> <li>• Swine production facility</li> <li>• Veterinary biologics firm</li> </ul>	<ul style="list-style-type: none"> <li>• Animal by-products</li> <li>• Animal foods/feeds</li> <li>• Baby food</li> <li>• Breaded food, frozen, raw</li> <li>• Canned food, low acid</li> <li>• Cereal, whole-grain, not heat treated</li> <li>• Deli salads</li> <li>• Dietary supplement, botanical, tablets</li> <li>• Entrees, fully cooked</li> <li>• Flour</li> <li>• Frozen packaged entrees</li> <li>• Fruit juice</li> <li>• Gum arabic (ingredient)</li> <li>• High fructose corn syrup (ingredient)</li> <li>• Honey</li> <li>• Ice cream</li> <li>• Infant formula</li> <li>• Milk, fluid</li> <li>• Peanut butter</li> <li>• Produce, fresh-cut and modified atmosphere packaged</li> <li>• Retail setting</li> <li>• Seafood, cooked, refrigerated, ready-to-eat</li> <li>• Soft drink, carbonated</li> <li>• Spices</li> <li>• Vitamin/micro-ingredient premixes/flavors</li> <li>• Vitamins, capsules</li> <li>• Water, bottled</li> <li>• Yogurt</li> </ul>
<p><u>Food Processing and Distribution</u></p> <ul style="list-style-type: none"> <li>• Deli meats processing</li> <li>• Ground beef processing facility</li> <li>• Hot dog processing</li> <li>• Import re-inspection facilities</li> <li>• Liquid eggs processing</li> <li>• Poultry processing</li> <li>• Retailers (further processing on-site)</li> <li>• School food service central kitchens</li> <li>• Transportation companies</li> <li>• Warehouses</li> </ul>	

**Table 2. Year Two Assessments Conducted (July 06 - September 07)**

<b>Date</b>	<b>Sector Specific Agency</b>	<b>Industry</b>	<b>State</b>
07/2006	FDA	Fluid Dairy - processing	NY
07/2006	USDA	Beef Cattle Feedlot	NE
08/2006	USDA	Ground Beef Processing	KS
08/2006	USDA	Livestock Auction Barn	MO, KS
09/2006	USDA	Dairy Farm	ID
10/2006	USDA	Soybean Farm	IL
11/2006	USDA	Corn Production	IL, IA
01/2007	FDA	Retail Fluid Milk	TX
02/2007	FDA	Flour Milling	OK
03/2007	FDA	Stadium Food Service	KS
03/2007	USDA	Link Sausage Production	WI
04/2007	USDA	Correctional Institution Food Processing-Ground Beef Production	OH
06/2007	FDA	Commercial Feed Mill	IA
06/2007	USDA	Hot Dog Production	PA
07/2007	USDA	Domestic Grain Cooperative-Grain Elevator	IA
07/2007	FDA	Breakfast Cereal (production)	MN
08/2007	FDA	Grocery Stores	PA
09/2007	USDA	USDA Commodity Warehouse	MO
09/2007	FDA	High Fructose Corn Syrup (production)	AL

**Table 3. Year-Three Schedule – Confirmed Assessments**

<b>Date</b>	<b>Sector Specific Agency</b>	<b>Industry</b>	<b>State</b>
10/2007	USDA	Import Re-Inspection Facility	MD
11/2007	FDA/USDA	Distribution	VA
11/2007	USDA	Poultry-Broiler Industry	GA



## **V. General Industry-Wide Vulnerabilities**

The very nature of the assessments conducted under the SPPA Initiative has been to determine the presence and extent of vulnerabilities at each node in an industry's production process (i.e., ground beef processing). Individual company participants provide perspective into industry-wide practices. When possible, this allows the results from one assessment to provide insight into similar vulnerabilities that may be encountered in like-products or like-processes.

The general vulnerabilities identified over the course of many SPPA assessments have been highly dependent upon whether they are a food or agricultural product.

### Food Processing

Assessments of processed foods showed a common focus on vulnerabilities that could be attacked as a means to harm public health or cause loss of life (e.g., intentionally contaminating a food product). Economic implications of each vulnerable food-processing node were significant, but overtaken by the public health implications.

In general, the nodes of highest concern for food products were those in which direct human contact with the largest amount of product (large batch sizes) was both possible and likely. The largest amount of product was typically found in containers that hold either bulk raw ingredients, or large amounts of mixed ingredients. These vulnerabilities were especially true when human access to product or ingredients is a normal operation step such as in the manual addition of secondary ingredients. Additionally, secondary ingredients are a high concern because they are usually dispersed and mixed into large amounts of product during further processing.

For post-processing, at the retail level, access to the largest amount of product was still the key factor in determining critical nodes. At the retail level, access to the product is encouraged, so the determination of critical nodes was highly dependent on the time available for both customers and employees to handle product and the amount of observation that may discourage attempts to adulterate product.

In summary, for processed foods, the amount of product that can be directly contacted and exploited by a terrorist (or disgruntled employee) usually limits vulnerabilities. Thus, processing steps and locations associated with large batch sizes and secondary ingredients that will be mixed stand out as areas of highest concerns and greater risks for adverse consequences.

## Agricultural Production

Agricultural products or commodities, such as livestock and crops, demonstrate different vulnerabilities than those of processed foods. Assessments showed that readily available, highly transmissible or contagious, plant and animal diseases are the greatest threat to these industries. In the case of agricultural production, the threat is usually examined from an economic perspective because infecting a single plant or animal may close our trading partners' borders to the product or commodity and would significantly impact the industry and possibly the national economy. One other nuance is if the threat agent is a zoonotic disease (transmissible between animals and humans), it raises the possibility for a dual impact to public health and the economy.

The areas of highest concern for agricultural products or commodities were those where there was primary (direct human contact) or secondary contact (such as through animal feed) with the product, and where conditions favored transmission or proliferation of a disease or threat agent. Crowded conditions (such as livestock pens) allow for rapid disease transmission and proliferation. Grain elevators and storage vessels allow high mixing of an intentionally introduced threat agent. To limit vulnerabilities associated with livestock and plant material, special attention must be taken in areas of transportation, nodes where feed and medicine are administered to animals, and locations that allow access to large quantities of harvested plant materials.

## **VI. Commonalities of Identified Mitigation Strategies and Good Security Practices**

Over the course of the SPPA assessments, participants discussed but did not come to consensus on numerous mitigation strategies, and good security practices. However, the assessment was a first step and further discussion can occur outside the SPPA. Mitigation recommendations may not, and are not, expected to apply universally to all sites, industries, or processes. The application of mitigation recommendations, even very general recommendations, must be based on a comprehensive determination of risk for a specific site. Where feasible, this report generalized the suggested mitigation strategies in order to show potentially broader applicability across industries.

Participants identified the following mitigation strategies, which may not apply to all industries.

### Biosecurity and Good Security Practices for Livestock and Plants

Biosecurity and good security practices for livestock and plants have encompassed two realms: protecting and isolating livestock and plants from pathogens, and mitigating the economic fallout after exposure. Discussion of

good security practices when dealing with protection and isolation were a cornerstone of past SPPA assessments that dealt with agricultural products or commodities. Highlighted and recurring themes include but are not limited to:

- Isolating new livestock acquisitions,
- Screening visitors, to include review of point of origin or recent travel locales,
- Decontaminating clothing and material prior to entering and departing premises, and
- Decontaminating materials used in the rearing process.

Additionally, industry participants should screen their water, animal feed, pesticide, and plant nutrient suppliers, as well as transportation providers.

Good security practices in a post-exposure state have received considerable attention during recent SPPA assessments. Highlighted good security practices include a robust foreign animal disease (FAD) screening and detection regimen, immediate isolation of suspected FAD-infected animals, and effective depopulation and disposal practices. In addition to physical practices industry participant recognize the need for a public relations campaign designed to educate consumers and ease foreign market concerns.

#### Physical Security Measures Based On Site-Specific Vulnerability Assessments

Within food processing industries, where possible, deterrents should be imposed or bolstered at highly accessible or vulnerable nodes. This may vary by site and depends on the production process point, but may include cameras, additional supervision, restricted access areas, color-coded uniforms or bump caps to designate work area, and limiting personal items on the production floor.

#### Agricultural Security and Food Defense Plans

Develop dedicated agricultural security or food defense plans or incorporate these plans into other security procedures or safety plans. Several trade organizations that have participated in the SPPA program have developed plan templates for their constituents. Industry can tailor these templates for their own specific processes/facilities or integrate the template with existing security and safety plans. For example, the FDA and USDA have developed model food defense plans and/or guidance: <http://www.cfsan.fda.gov/~dms/defterr.html> and [http://www.fsis.usda.gov/Food\\_Defense\\_&\\_Emergency\\_Response/Security\\_Guidelines/index.asp](http://www.fsis.usda.gov/Food_Defense_&_Emergency_Response/Security_Guidelines/index.asp). The USDA has also developed voluntary agricultural security guidance: [http://www.usda.gov/documents/PreHarvestSecurity\\_final.pdf](http://www.usda.gov/documents/PreHarvestSecurity_final.pdf)

#### Conduct Site-Specific Vulnerability Assessments

Conduct site-specific assessments to learn of vulnerabilities unique to that site. This activity can build upon the SPPA assessments, which are general product or

commodity assessments. All vulnerability assessments should be periodically revisited and modified as necessary. As new tools become available, industry should experiment to find the most useful tool for their specific product, commodity, or process. During the summer of 2007, the FDA released a free software version of the CARVER + Shock assessment tool to facilitate site-specific assessments: <http://www.cfsan.fda.gov/~dms/carver.html>.

### Process Design Changes

Process design changes, such as altering the time/temperature of a food-processing step may be useful to eliminate certain threat-agents. This would require valid, reliable, and scientifically supported information regarding the stability characteristics of all possible threat-agents and any changes must provide sufficient benefit to outweigh any adverse affects on final product quality. Process design changes could also include the physical layout of a production facility (i.e., place critical nodes where employee traffic can be controlled or monitored).

### Penetration Audits

Penetration audits may be a useful tool to assess or validate security procedures. They may also be useful to validate the results of risk assessments. Penetration audits may include having an outsider attempt to access the facility or may be conducted by having a current employee attempt to access another location within the facility to see if they are challenged or if their activity is noticed and communicated to superiors.

### Agricultural Security and Food Defense Incorporated into Procurement Selection Process

Agricultural security and food defense-related parameters and Standard Operating Procedures (SOPs) could be applied to procurement selection processes and vendor assurance programs. The goal is to assure the security and defense of raw ingredients and other inputs. This action may also cause a trickle-down effect where security or defense measures are implemented throughout the agricultural and food industries. For instance, food processors may require that spice suppliers have a food defense plan and conduct food defense training.

### Raw Materials Inspection

Raw materials inspection procedures should be enhanced to include an emphasis on the detection of tampering or adulteration. This could include SOPs for rejecting opened, damaged, or altered goods, and quarantine and investigation procedures. The use of tamper resistant labels on packaging and containers should also be encouraged.

## Employee Peer Monitoring Programs

Companies should create or further develop employee peer monitoring programs to include an emphasis on agricultural security and food defense activities. Employees are a valuable asset and can be utilized to increase security for little or no additional cost to a company. Examples would include “badge challenges” – questioning anyone without a visible and valid company identification badge, and “location challenges” – questioning peers that are found in areas not associated with their job function. Another option is to team individuals together (buddy system) at nodes of higher concern. The addition of another individual that verifies and oversees the production process provides dual control during a critical step.

## Awareness Training

Awareness training should be implemented to educate employees about the importance of agricultural security and food defense. These activities would need to be tailored to the appropriate audience at each level within an organization. Awareness training could include information regarding the implications of a terrorist attack on the U.S. food supply (including production agriculture). To further this goal, FDA and USDA offer a free web-based course: <http://www.fda.gov/ora/training/orau/FoodSecurity/startpage.html>. FDA has also introduced the ALERT program intended to raise the awareness of state and local government agency and industry representatives regarding food defense issues and preparedness: <http://www.cfsan.fda.gov/~dms/alert.html>.

## Trade Industry Group Good Security Practices:

Trade industry groups can encourage their members to adopt uniform food defense and agriculture security practices through guidance documents and good security practices developed by industry and trade associations. Many industry groups and trade associations currently have existing components of agricultural security or food defense plans, e.g., emergency contact lists, biosecurity procedures, physical security programs, and recall procedures. Companies should evaluate existing programs to see if they compliment or strengthen security or defense plans. The evaluation findings may justify the financial commitments necessary to make changes within a system or process design. Industry, in general, would prefer for trade organizations to promote the adoption of good security practices.

## **VII. Commonalities of Identified Research Gaps and Needs**

Throughout the SPPA assessments, and subsequent discussions, participants identified numerous research gaps and needs. For this report, research gaps and needs that were highly specific for a single product or commodity have been omitted or generalized so that they are more broadly applicable.

### Threat-Agent and Agent/Matrix Research:

Industry participants expressed a need for more specific threat-agent information. Participants identified the following agent or agent-matrix research needs as priorities:

- Can a list of biological and chemical agents be prioritized for their potential risk to specific products or commodities?
- Is information regarding threat-agent inactivation temperatures, effects of environmental conditions, agent persistence, etc. known and readily available to the food industry? Although it is not feasible to research the stability of all potential threat-agents against all scenarios, general threat-agent stability information in a representative variety of conditions and matrices would be useful.
- What oral dose is toxic or infectious for each threat-agent (biological and chemical)? The minimum toxic or infective dose may be useful during threat assessments.
- What are possible or feasible ranges of terrorist capabilities for threat-agent production or acquisition?

### Incident Detection:

Industry participants noted a need for information concerning the detection methods currently available for threat-agents (biological and chemical) applicable to each industry. They also asked which detection methods have been validated against products or commodities within their industry. The following specific questions have been asked:

- What detection methods are currently available?
- Are the methods rapid?
- What methods have been validated against particular products, commodities, or processes?
- To whom are the methods/materials available (industry, emergency responders, etc.)?

### Incident Magnitude and Response:

Industry participants expressed interest in the development or availability of economic models or studies on the consequences of terrorist attacks on certain food products or agricultural commodities. The interdependencies and supply

chain complexities of the food and agriculture industry make the impact of an attack on a single item or commodity difficult to determine. Additionally, the participants sought information regarding the time or method to restore consumer confidence following an attack.

To assist the industry, and State and local government officials responding to a terrorist attack against foods where threat agents are used, the USDA has published the “Guidelines for the Disposal of Intentionally Adulterated Food Products and the Decontamination of Food Processing Facilities”:

[http://www.fsis.usda.gov/Food\\_Defense\\_&\\_Emergency\\_Response/Security\\_Guidelines/index.asp](http://www.fsis.usda.gov/Food_Defense_&_Emergency_Response/Security_Guidelines/index.asp).

Similarly, the U.S. Environmental Protection Agency (EPA) has published the “Federal Food and Agriculture Decontamination and Disposal Roles and Responsibilities”: <http://www.epa.gov/homelandsecurity/htm/ohs-food.htm>.

#### Improved Communication Channels:

There is an abundance of food defense and agriculture security information available from government websites, trade organizations, State and local health or agriculture departments, etc. The participants at several SPPA assessments suggested creating a single resource by consolidating these materials. A possible solution to this issue is the use of the Food and Agriculture section of Homeland Security Information Network, a web portal for information sharing. The SSAs have been working with DHS to improve this portal so that it can be a one-stop shop for the sector to find and share security or defense information. For more information about this portal, please contact DHS’ Lyle Jackson ([lyle.jackson@dhs.gov](mailto:lyle.jackson@dhs.gov)).

An additional communication issue was the need for simplified and uniform point-of-contact lists and procedures for suspicious incidents. Many industry and State participants requested clear protocols for whom to contact (besides local law enforcement) following a suspected contamination or terrorist event. One such resource is FoodSHIELD, a communication tool hosted by the National Center for Food Protection and Defense – A DHS Center of Excellence: [www.foodshield.org](http://www.foodshield.org). The “one-stop” website provides the emergency contact information sought by the participants. The USDA is a supporter and partner in FoodSHIELD.

## **VIII. Commonalities of Identified Threat Indicators**

Threat indicators, early warnings of a possible suspicious event or planning for an attack, have been discussed at all assessments. Participants have focused upon very general threat indicators dealing with employee vigilance and awareness. These indicators include:

- Observing employees, visitors, vendors, and contractors in areas where they have no legitimate reason to be.
- Someone expressing an unusual interest in the production process.
- Employee health patterns such as unusual absence or attendance patterns and illnesses related to particular job functions or work areas.
- Delays in deliveries, deviations from delivery schedules or evidence of product tampering.

## **IX. Participant Perspective**

Although much information has been exchanged during the course of these assessments, the greatest benefit may be in the enhanced communication channels that are formed during each assessment. Numerous initiatives such as this, at the Federal and State levels to collaborate on security efforts, are the result of a shift to working in partnership to address security issues. Programs and assessments such as the SPPA and others have further bolstered the trust between industry and their government partners, while also allowing government agencies to tap into the valuable knowledge base found in private industry.

The comments received from industry participants and trade organizations regarding the SPPA assessments have been very positive. The structure of these assessments has been somewhat informal, allowing open discussions and questions. This informal atmosphere has further improved the interactions and open communications among the industry and government participants. The fact that multiple Federal agencies are represented has also been a great advantage for industry participants. Often a single question posed by industry can be addressed by the multiple perspectives of both the Federal and State food and agriculture leads, and law enforcement agents in attendance. Having all of these voices in the same room at the same time strengthens the industry perception that all facets of the Government are working in unison to improve the safety and security of the food and agriculture sector.

## **X. Conclusion**

It is virtually impossible to guard against all threats to the food and agriculture supply. Food and agriculture industries, like all facets of U.S. commerce, must anticipate the possibility of a terrorist attack on their products and evaluate their



preparedness and mitigation strategies to either thwart an attack or, at the very least, mitigate the damage, and recover from the economic and psychological impact of an attack. The SPPA initiative is a significant step towards hardening food and agriculture industries. This is accomplished by providing training and hands-on experience with a terrorism-focused assessment tool to industry members, by providing Federal, State, and local government an in-depth look at the vulnerabilities that may be associated with facets of the food and agriculture industries, and by increasing communication between industry, government, and law enforcement stakeholders.

**Appendix A  
Strategic Partnership Program  
Agroterrorism Initiative**

**Year One Completed Assessments (November 2005 – June 2006)**

<b>Date</b>	<b>Sector Specific Agency</b>	<b>Industry</b>	<b>State</b>
11/2005	FDA	Yogurt	TN, MN
12/2005	FDA/ USDA	Grain – export elevators	LA
01/2006	FDA	Bottled Water	NJ
02/2006	FDA	Baby Food – jarred applesauce	MI
02/2006	USDA	School Central Kitchens	NC
03/2006	USDA	Swine Production	IA
03/2006	FDA/ USDA	Frozen Food – pizza	WI, FL
04/2006	FDA	Juice Industry – apple juice	NH
04/2006	USDA	Egg Products – liquid	PA
05/2006	FDA	Fresh-Cut Produce – bagged salads	CA
06/2006	FDA	Infant Formula	AZ
06/2006	USDA	RTE Chicken Products	AR

## **Appendix B**

### **Strategic Partnership Program Agroterrorism Initiative**

#### **Executive Summary**

#### **OVERVIEW:**

The Department of Homeland Security (DHS), U.S. Department of Agriculture (USDA), Food and Drug Administration (FDA), and the Federal Bureau of Investigation (FBI) will collaborate with private industry and the States in a joint initiative, the Strategic Partnership Program Agroterrorism (SPPA) Initiative. The SPPA Initiative will be a true *partnership* program, where an industry member or trade association or State may volunteer to participate. To volunteer, the industry or State member must submit a completed response form.

#### **PROGRAM OBJECTIVES**

The federal government members in partnership with industry and State volunteers, plan to:

- Validate or identify sector-wide vulnerabilities by conducting critical infrastructure/key resources (CI/KR) assessments in order to:
  - a. Identify gaps;
  - b. Inform Centers of Excellence and Sector Specific Agencies (SSA) of identified research needs; and
  - c. Catalog lessons-learned.
- Identify indicators and warnings that could signify planning for an attack.
- Develop mitigation strategies to reduce the threat/prevent an attack. Strategies may include actions that either industry or government may take to reduce vulnerabilities.
- Validate assessments conducted by the United States Government (USG) for food and agriculture sectors.
- Gather information to enhance existing tools that both USG and industry employ.
- Provide the USG and the industry with comprehensive reports including warnings and indicators, key vulnerabilities, and potential mitigation strategies.
- Provide sub-sector reports for the USG that combines assessment results to determine national critical infrastructure vulnerability points to support the National Infrastructure Protection Plan (NIPP) and national preparedness goals.

- Establish and/or strengthen relationships between Federal, State, and local law enforcement and the food and agriculture industry along with the critical food/agriculture sites visited.

#### **IMPLEMENTATION:**

To facilitate this work, a series of site visits will be conducted at multiple food and agriculture and production facilities. Every Food and Agriculture Sector sub-sector will be studied (i.e. production, processing, retail, warehousing, and transportation) in order to assess the farm-to-table continuum. The primary purpose of the visit is to work with industry to validate or identify vulnerabilities at the specific site and the sector as a whole. These visits will be built upon the work done by the SSAs in order to assist in developing the National Infrastructure Protection Plan (NIPP), Federal Sector Specific Plans (SSP) and state SPP. All of the visits will be conducted on a volunteer basis.

The target start date for the SPPA program is September 1<sup>st</sup>, 2005. Two sites visits will be conducted each month - approximately one FDA and one USDA facility.

Teams comprised of knowledgeable personnel from the SSA, FBI, DHS, local and state officials, and industry will be formed to conduct the surveys.

#### **RESULTS:**

The desired results of the SPPA Initiative are:

- Reports that details identified vulnerabilities, possible mitigation strategies, and warnings and indicators for each site. The reports will be distributed to all site participants.
- Reports that outline sector-wide vulnerabilities and lessons learned to effectively and appropriately prioritize national assets and resources. The reports will be distributed to DHS, USDA, FDA, and FBI.
- Each industry sub-sector will apply the CARVER assessment tool, and adapt, if necessary, to its unique production, processing, retail, warehousing, and transportation system. Data sets will be set by GCC. Those data sets will be collected during the site visits and will be compiled by subsector (i.e. slaughterhouse, processing plant, etc). This data will be translated so outputs can be compared with other critical infrastructure sectors.
  - CARVER + Shock templates
  - Lessons learned

- Assessment templates for each ‘system’ by sub-sector that can be exported to other sites to identify vulnerabilities that incorporate existing tools.
- Sector-specific investigative templates and field guides for the food and agriculture/intelligence sector.
- Provide data to the NIPP working groups for further development of the NIPP and national preparedness plans.
- Increase awareness within industry and government needs regarding resources requirements and capabilities; current threats; and recognition of attack indicators.
- Identify and validate R&D initiatives related to the food and agriculture sector. Ensure that industry concerns and issues are carried forward to further R&D efforts.

### **EXAMPLE TIMELINE FOR SITE VISIT**

After receiving an application from an industry or State volunteer, the SSA will work through the Food and Agriculture Sector Coordinating Councils to establish contact initially. After the site selection and initial contact has been made by the SSA, the following serves as an example of how to approach the visit:

4 weeks prior to the visit:

The contractor will contact the participant to set up administrative and logistical arrangements.

1 week prior to the visit:

The contractor will confirm all arrangements for the site visit and send a read ahead packet to the industry participants. The contents will likely include objectives and agenda for the visit and any supporting or relevant documents.

Site visit and assessment:

The total visit will take approximately 3 days to complete depending on complexity.

Proposed Agenda:

- a. Introductions (all agencies represented and industry)
- b. Threat brief and/or case studies
- c. CARVER + Shock review by Lead SSA
- d. Design flow diagram of subject food, animal or plant production/process
- e. Documents/references
  - i. Template
  - ii. Agents
  - iii. Technical information

- f. Conduct Assessment of vulnerabilities
- g. Review results (including implications of an attack, investigative leads)
- h. Identify mitigation strategies and good security practices
- i. Identify gaps to serve as research questions
- j. Close

1 week after the visit:

The working papers report will be distributed to the USG representatives and participants.

4 weeks after the visit:

The final report will be distributed to the USG representatives for review and classification.

**Appendix C**  
**Strategic Partnership Program Agroterrorism Initiative**  
**Criteria List**

**(V = Validate, I = Initiate)**

**A.) USDA's Criteria for Site Visits**

**Production Agriculture**

- Aquaculture Production Facility - I
- Beef Cattle Feedlot - V
- Cattle Stockyard/Auction Barn - I
- Citrus Production Facility - I
- Corn Farm - I
- Dairy Farm - I
- Grain elevator and storage facility - I
- Grain export handling facility - I
- Poultry Farm - I
- Rice Mill - I
- Seed Production Facility - I
- Soybean Farm - I
- Swine Production Facility - V
- Veterinary Biologics Firm - I

**Food Processing and Distribution**

- Deli meats processing - V
- Ground beef processing facility - V
- Hot dog processing - V
- Import Re-inspection facilities - V
- Liquid eggs processing - V
- Poultry processing - V
- Retailers (further processing on-site) - I
- School food service central kitchens - I
- Transportation companies - I
- Warehouses - I

## B.) FDA's Criteria for Site Visits

- Animal by-products - I
- Animal foods/feeds - I
- Baby food - I
- Breaded food, frozen, raw - I
- Canned food, low acid - I
- Cereal, whole-grain, not heat treated - I
- Deli salads - I
- Dietary supplement, botanical, tablets - I
- Entrees, fully cooked - I
- Flour - I
- Frozen packaged entrees - I
- Fruit juice - V
- Gum Arabic (ingredient) - I
- High fructose corn syrup (ingredient) - I
- Honey - I
- Ice cream - I
- Infant formula - V
- Milk, fluid - V
- Peanut butter - I
- Produce - I
  - Fresh - V
  - Cut, modified atmosphere packaged - V
- Retail setting - I
- Seafood, cooked, refrigerated, ready-to-eat - I
- Soft drink, carbonated - I
- Spices - I
- Vitamin/Micro-ingredient premixes/flavors - I
- Vitamins, capsules - I
- Water, bottled - V
- Yogurt - I



**Appendix D**  
**Strategic Partnership Program Agroterrorism Initiative**  
**CARVER Assessments**  
**Response Form**

1. Primary Person (Volunteer Name)
  - a. State Organization
  - b. Industry Group Name
  
2. State or Industry Partner (if available)
  
3. System/commodity (Choose from FDA and USDA list)
  - a. Choice 1
  - b. Choice 2
  - c. Choice 3
  
4. Potential site(s)
  - a. Choice 1 – Company Name, City and State
  - b. Choice 2
  - c. Choice 3
  
5. Possible date(s)
  - a. Choice 1- Week, Month and Year
  - b. Choice 2- Week, Month and Year
  - c. Choice 3- Week, Month and Year
  
6. Additional Needs

Submit this response form to:

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FDA – LeeAnne Jackson, [leeanne.jackson@fda.hhs.gov](mailto:leeanne.jackson@fda.hhs.gov), 301-436-1593

FBI – Gretchen Lorenzi, [gretchen.lorenzi@ic.fbi.gov](mailto:gretchen.lorenzi@ic.fbi.gov), 202-324-0236

DHS – Lyle Jackson, [lyle.jackson@dhs.gov](mailto:lyle.jackson@dhs.gov), 202-447-3176

Food Products Association - Allen Matthys [amatthys@fpa-food.org](mailto:amatthys@fpa-food.org), 202-639-5960