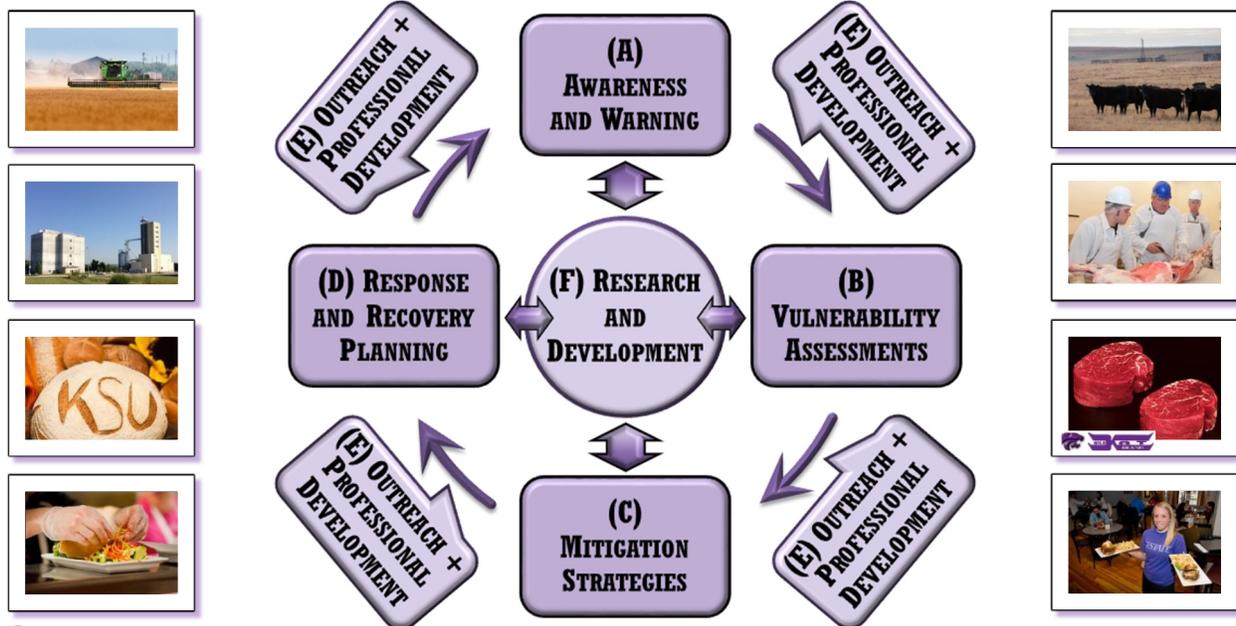


U.S. Bio/Agrodefense Roadmap ^(i, ii, iii)



Protecting American Agriculture – Crops, Livestock – and Food from Global Biothreats*



*While Safeguarding People from Zoonotic Animal Diseases and Foodborne Pathogens

- (i) Homeland Security Presidential Directive/HSPD-9, *Defense of United States Agriculture and Food* (Jan. 30, 2004) delineated the requirements (A-F) to protect agriculture and food from “diseases, pests, or poisonous agents.”
- (ii) Public Law 115-43, *Securing Our Agriculture and Food Act*, in 2017 amended the *Homeland Security Act* of 2002 to codify HSPD-9-related bio/agrodefense obligations in federal statute whereby “the Secretary (of Homeland Security) acting through the Assistant Secretary for Health Affairs, shall carry out a program to coordinate the Department’s efforts related to defending the food, agriculture, and veterinary systems of the United States against terrorism and other high-consequence events that pose a high risk to homeland security.”
- (iii) National Security Presidential Memorandum/NSPM-14, co-issued with the National Biodefense Strategy (NBS), Sept. 18, 2018, stipulates federal “agency biodefense activities shall be conducted consistent with ... prior ... Presidential Directives,” including HSPD-9, i.e., HSPD-9 remains active and in force. However, the NBS supersedes and replaces HSPD-10, *Biodefense for the 21st Century* (Apr. 28, 2004), which focused on human biothreats.

HOMELAND SECURITY PRESIDENTIAL DIRECTIVE/HSPD-9 NUMBERED ELEMENTS

[PARENTHESES: Federal Agency Lead/Co-Leads per HSPD-9 and Affirmed by PL 115-43 & NSPM-14]

(A) AWARENESS AND WARNING: Exploit Global Intelligence re: Crop/Livestock/Food Biological Threats

- (8) *Develop “robust, comprehensive, and fully coordinated surveillance and monitoring systems” for diseases of animals, plants, wildlife and people along with threats to food and water quality. The system developed was to include nationwide diagnostic networks for “food, veterinary, plant health and water quality.”* [DOI/USDA/HHS/EPA Co-Lead]
- (9) *Advance “intelligence operations and analysis capabilities focusing on agriculture, food, and water sectors.”* [AG/DHS/CIA Co-Lead]
- (10) *Create “a new biological threat awareness capacity that will enhance detection and characterization of an attack.”* [DHS Leads]

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- (B) VULNERABILITY ASSESSMENTS:** Evaluate Crop/Livestock/Food Susceptibility to Emerging Biothreats
- (11) *(a) Conduct “vulnerability assessments of the agriculture and food sectors,” [USDA/HHS/DHS Co-Lead] and (b) identify agriculture and food (critical infrastructure) “requirements for the National Infrastructure Protection Plan” to be updated every 2 years. [DHS Leads]*
- (C) MITIGATION STRATEGIES:** Develop Policies and Procedures to Diminish Biothreat Vulnerabilities
- (12) *Prioritize, develop, and implement “mitigation strategies to protect vulnerable critical nodes of production or processing from the introduction of diseases, pests, or poisonous agents.” [DHS/AG Co-Lead]*
- (13) *Develop “common screening and inspection procedures for agriculture and food items entering the United States” and maximize “effective domestic inspection activities for food items within the United States.” [USDA/HHS/DHS Co-Lead]*
- (D) RESPONSE AND RECOVERY PLANNING:** Implement Tactics to Respond and Recover from Outbreaks
- (14) *Ensure “combined Federal, State, and local response capabilities are adequate to respond quickly and effectively to a terrorist attack, major disease outbreak, or other disaster affecting the national agriculture or food infrastructure.” [DHS Leads]*
- (15) *Develop “a coordinated agriculture and food-specific standardized response plan that will be integrated into the National Response Plan.” [DHS Leads]*
- (16) *Enhance “recovery systems that are able to stabilize agriculture production, the food supply, and the economy, ... dispose of contaminated agriculture and food products or infected plants and animals, and decontaminate premises.” [USDA/HHS Co-Lead]*
- (17) *Recommend “... financial risk management tools encouraging self-protection for agriculture and food enterprises vulnerable to losses due to terrorism.” [USDA Leads]*
- (18) *Develop “with State and local governments and the private sector” ... (a) a National Veterinary Stockpile and (b) a National Plant Disease Recovery System. [USDA Leads]*
- (E) OUTREACH AND PROFESSIONAL DEVELOPMENT:** Inform/Educate/Train Agriculture/Food Stakeholders
- (19) *Work “with appropriate private sector entities to establish an effective information sharing and analysis mechanism for agriculture and food.” [DHS Leads]*
- (20) *Support “the development of and promote higher education programs for the protection of animal, plant, and public health.” [USDA/HHS Co-Lead]*
- (21) *Develop and promote “a higher education program to address protection of the food supply.” [USDA/HHS Co-Lead]*
- (22) *Establish “opportunities for professional development and specialized training in agriculture and food protection, such as internships, fellowships, and other post-graduate opportunities that provide for homeland security professional workforce needs.” [USDA/HHS/DHS Co-Lead]*
- (F) RESEARCH AND DEVELOPMENT:** Advance Countermeasures to Protect Crops/Livestock/Food/People
- (23) *Accelerate and expand the “development of current and new countermeasures against the intentional introduction or natural occurrence of catastrophic animal, plant, and zoonotic diseases.” [DHS/USDA/HHS/EPA/Others Co-Lead; OSTP consults; DHS coordinates]*
- (24) *Provide “safe, secure, and state-of-the-art agriculture biocontainment laboratories ... for foreign animal and zoonotic diseases.” [USDA/DHS Co-Lead ➔ NBAF in Manhattan, KS]*
- (25) *“Establish university based centers of excellence in agriculture and food security.” [DHS Leads in consultation with USDA/HHS ➔ Established by DHS, but unfunded today]*

BUDGET: (26) *USDA/HHS/DHS to submit “an integrated budget plan for defense of the U.S. food system.”*