AGRO-TERRORISM IN CALIFORNIA: RESPONDING TO LEGITIMATE BIOLOGICAL THREATS WITH EFFECTIVE LEGISLATIVE RESPONSES

I. INTRODUCTION

In February 2001, in a rural area in the United Kingdom ("U.K"), a group of hogs were unintentionally fed improperly sterilized garbage infected with hoof and mouth disease.[1] Within two days, all U.K. exports of meat products were banned by the European Union.[2] By October 2001, the worst outbreak of hoof and mouth disease had been halted by the mass slaughter of over six million livestock and cost approximately eight billion dollars.[3] Mass transit of meat products was halted through certain areas, tourism suffered, and consumer safety confidence was destroyed.[4] This catastrophe started on a single farm and spread across the country from the *unintentional* contamination of a wildly contagious disease.[5] It is indeed hard to imagine the impact of hoof and mouth disease had it been *intentionally* introduced into the livestock at *multiple* locations across the country.[6] This concept of intentional mass destruction and economic disruption caused by an outbreak of a biological disease would certainly be considered an act of terrorism, and is not a

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[1] Doug Morris, *A Farmer's Negligence*, BBC NEWS WORLD EDITION (May 30, 2002), *available at* http://news.bbc.co.uk/2/hi/uk_news/england/2016461.stm.

[2] *Foot-and-mouth Crisis Remembered*, BBC NEWS ENGLAND, Feb. 17, 2011, *available at* http://www.bbc.co.uk/news/uk-england-12483017.

[3] *See* ANDREW DONALDSON ET AL., FOOT AND MOUTH – FIVE YEARS ON: THE LEGACY OF THE 2001 FOOT AND MOUTH DISEASE CRISIS FOR FARMING AND THE BRITISH COUNTRYSIDE 2, 4 (Centre for Rural Economy Discussion Paper Series No. 6, 2006) *available at* http://www.ncl.ac.uk/cre/publish/discussionpapers/pdfs/dp6.pdf.

[4] *See id*. at 2, 6.

[5] Morris, *supra* note 1.

[6] *Cf. Foot-and-mouth Crisis Remembered*, supra note 2 (discussing impact of a single source of negligent contagious disease contamination).

threat isolated to the United Kingdom, but can happen anywhere there is a large presence of livestock.[7]

While California's agricultural industry itself has not been the target of a terrorist attack of this nature, the lack of historical occurrence does not mean that it is not vulnerable.[8] The Hertzberg-Alarcon California Prevention of Terrorism Act was enacted into legislation in 1999 in an attempt to thwart terrorism within the state.[9] One particular weakness in the state terrorism legislation is that it fails to properly and effectively define an act of terrorism against the agriculture industry in California.[10] California agriculture is a nearly $36.6 billion dollar industry that generates $100 billion in related economic activity.[11] Considering the depth of agriculture to the California economy and food supply, protecting this industry from an intentional attack or disruption should be a top priority.[12] The most effective method of protection from a preemptive standpoint would be to adopt comprehensive agricultural terrorism legislation that would provide concurrent jurisdiction to California peace officers so that in the event of an attack the state officials could immediately respond and not rely solely on federal investigation and prosecution.[13]

The next section of this Comment will elaborate upon the characteristics of a terrorist attack on the agricultural sector. Part III will then emphasize the economic effects of an agro-terrorism attack. Part IV will discuss the economic consequences of an agro-terrorism attack, both within the state of California and resulting nationwide impact. Part V will discuss California vulnerabilities in particular. Part VI will highlight the importance of an effective response measure to a very legitimate threat to the agricultural sector. Part VII onward will analyze the existing California legislation and the inadequacies of such legislation as applied to agro-terrorism and compared to other states' measures in the area. Lastly, recommendations for the improvement of the California legislation will be explored in an effort to more comprehensively anticipate and respond to an act of agro-terrorism within California.

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[7] Richard Wallace, *Hoof and Mouth Disease*, ILLINI DAIRY NET (Feb. 6, 2001), http://www.livestocktrail.illinois.edu/dairynet/paperdisplay.cfm?contentid=603.

[8] *See infra* Part V.

[9] *See* CA B. An., A.B. 140 Sen. (1999).

[10] *See generally* CA B. An., *supra* note 9.

[11] *California Department of Food and Agriculture: 93 Years Protecting and Promoting Agriculture in the Golden State*, CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE, www.cdfa.ca.gov/CDFA-History.html (last visited Oct. 7, 2012).

[12] *See id.*

[13] *See* CA B. An., *supra* note 9.

II. AGRICULTURAL TERRORISM

As the above hoof and mouth disease example makes apparent, terrorism is not solely the hijacking of an airplane; terrorism has no limits or bounds, making the protection of our vital interests more difficult than ever before.[14] Agricultural terrorism or agro-terrorism, a subset of biological terrorism, can take many forms, from bacterial contamination of dairy products, intentional spread of infectious animal disease, or even the introduction of an invasive species to disrupt a naturally thriving ecosystem.[15] Agro-terrorism is more specifically defined as the "deliberate introduction of an animal or plant disease with the goal of generating fear, causing economic losses, and/or undermining social stability."[16] Historically, this sort of terrorism is not a new concept.[17] In the last one hundred years alone, there have been twenty-two incidents of known or suspected intentional crop destruction or food contamination for the purpose of weakening an enemy or making a political statement.[18]

Agricultural terrorism is both a threat from domestic and international actors.[19] The current ongoing struggle between the United States and political and religious extremists in the Middle East who pose the greatest threat to the United States are not outside the agro-terrorism discussion.[20] The concept of this sort of terrorism is familiar to many in the war-torn regions of the Middle East, especially Afghanistan, where Soviets used crop destruction as a weapon against the Afghan mujahideen in 1979-1984.[21] Further, in 2002, a United States military raid of Al-Qaeda

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[14] *Id*.

[15] *See* Jim Monke, *Agroterrorism: Threats and Preparedness*, CRS REPORT FOR CONGRESS 1-2 (Congressional Research Service, The Library of Congress, 2004) *available at* http://www.cnmihomelandsecurity.gov.mp/downloads/agroterrorism-threat-and-preparedness.pdf.

[16] *Id*. at 1.

[17] *See Chronology of CBW Incidents Targeting Agriculture 1915-2008*, JAMES MARTIN CENTER FOR NONPROLIFERATION STUDIES, http://cns.miis.edu/cbw/agchron.htm (last visited July 9, 2012).

[18] *Id*.

[19] *See generally id*.

[20] *See* Dean Olson, *Agroterrorism: Threats to America's Economy and Food Supply*, FBI LAW ENFORCEMENT BULLETIN (United States Department of Justice Federal Bureau of Investigation, D.C.) 1-3 (Feb. 2012), *available at* http://www.fbi.gov/stats-services/publications/law-enforcement-bulletin/february-2012/february-2012-leb.

[21] *Chronology*, *supra* note 17 (indicating that during the Soviet invasion of Afghanistan, Soviet forces were alleged to have used that destroyed crops through both biological and chemical agents, evidenced particularly in the wheat fields).

safe houses produced multiple documents and training manuals relating to agricultural terrorism attacks.[22]

III. EFFECT OF AGRO-TERRORISM IN CALIFORNIA

Agro-terrorism has received legislative attention nationwide, as will be discussed herein, but California especially should ensure its own state terrorism legislation is comprehensive. An attack on the agriculture sector in the United States could happen anywhere, but California is uniquely vulnerable.[23] While to parts of the nation, California may very well be best known for reality television stars and an excellent wine selection, residents of California are not unaware of the diverse and agriculturally rich terrain that makes up most of the state.[24] The San Joaquin Valley is one of the most vibrant agricultural epicenters of the nation[25] and supplies vast amounts of produce, meat, and dairy products both domestically and abroad.[26] With this unique opportunity for mass food production, California has spearheaded the concept of large-scale commercial farming, boasting feedlots with thousands of head of cattle and forty-three million acres of land used for agriculture, twenty-seven of which solely form cropland.[27] While California's agribusiness may provide unparalleled opportunity and economic growth for the state itself,[28] it also carries a unique risk of agricultural terrorism due to the rural and expansive nature of farming.[29]

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[22] Olson, *supra* note 20, at 1.

[23] *See infra* Part V.

[24] *See generally California Department of Food and Agriculture: 93 Years Protecting and Promoting Agriculture in the Golden State*, *supra* note 11.

[25] Devin Galloway & Francis S. Riley, *San Joaquin Valley, California*: *Largest human alteration of the Earth's surface*, U.S. GEOLOGICAL SURVEY, http://pubs.usgs.gov/circ/circ1182/pdf/06SanJoaquinValley.pdf (last visited Sept. 16, 2012).

[26] *California Agricultural Production Statistics*, CDFA.CA.GOV, http://www.cdfa.ca.gov/statistics/ (last visited September 16, 2012).

[27] *California Livestock Review*, UNITED STATES DEPARTMENT OF AGRICULTURE NATIONAL AGRICULTURAL STATISTICS SERVICE (Mar. 2012), at 1-2; *California Agricultural Land Loss & Conservation: The Basic Facts,* AMERICAN FARMLAND TRUST, http://www.farmland.org/documents/AFT-CA-Agricultural-Land-Loss-Basic-Facts_11-23-09.pdf.

[28] *See California Agricultural Production Statistics*, *supra* note 26.

[29] *See* Olson, *supra* note 20, at 6 ("Farms, ranches, and feedlots in America are dispersed, open, and generally unprotected.").

IV. STATE AND NATIONAL ECONOMIC IMPACT

It is imperative that California take all legislative precautions possible to prevent and respond to an agro-terrorism attack because the effect of such attack could be devastating economically. Agriculture has a profound impact on the economic well-being of the state of California as a whole,[30] not just in relation to exports and sale of food products within the state but on the millions of individuals in California that make their living in the farm industry.[31] A founding principle of terrorism is the goal of making such an impact that their political end receives attention, whether by loss of life or economic destruction.[32] While the terrorist attack on September, 11, 2001, resulted in a significant loss of life and economic devastation, an attack on California's agricultural industry similarly could result in billions of dollars of economic loss for the residents and general economy of California, with a ripple effect across the entire nation via a surge in food prices.[33]

The economic impact of an agro-terrorism attack, or even a credible threat,[34] could cost the United States billions of dollars.[35] Osama bin Laden, former leader of the global terrorist group al-Qaeda, had repeatedly argued that attacking the economy was the best way to destroy and undermine America's power and ability to project military power abroad.[36] Reiterating this tactic, he is quoted to say that al-Qaeda "bled Russia for [ten] years until it went bankrupt and was forced to withdraw in defeat. . . . We are continuing in the same policy to make America bleed profusely to the point of bankruptcy. . . ."[37] Certainly, the attack on the World Trade Center in 2001 had a drastic financial impact on the

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[30] Tracie Cone, *Agriculture is Bright Spot in California Economy,* BUS. WK., July 26, 2012, http://www.businessweek.com/printer/articles/54692?type=ap.

[31] AGRICULTURE VALUE CHAIN FOR CALIFORNIA, CENTERS OF EXCELLENCE ECONOMIC AND WORKFORCE DEVELOPMENT (2011), *available at* http://www.coeccc.net/documents/rb_ag_sw_11.pdf (noting that the California agricultural sector employs 2.5 million individuals with an average salary of $50,000 annually according to a 2011 study).

[32] *See* Olson, *supra* note 20, at 2-3, 8.

[33] *See id*. at 3.

[34] *See id*. (explaining that if a credible threat of contamination were suspected, areas of livestock would be quarantined and stop-movement orders issued to halt the spread of contamination and that this disruption in the regulated movement of products alone would have a large financial impact and require immeasurable investigatory resources).

[35] *E.g.*, A hoof and mouth disease outbreak similar to the 2001 U.K. outbreak would cost the United States an estimated $60 billion. Olson, *supra* note 20, at 5.

[36] *Id*. at 3.

[37] *See id.*

United States.[38] The concept is that if the United States economy is in shambles, then the nation will not have the resources to continue to pursue military efforts in the Middle East and terrorist cells can attempt to dominate the region unchecked.[39] Furthermore, a direct impact on the citizens of the country, physical or purely economic, can lead to distrust in the government and hesitation in spending additional money in the Middle East pursuing groups that retaliate against us.[40]

V. CALIFORNIA VULNERABILITIES AT A GLANCE

A. Crops as a Target

Even considering the narrow aspect of agro-terrorism, California has multiple points of vulnerability, compounding the need for a more personalized legislative response to the threat. One category of potential threat is the intentional disruption of the water supply that is so vital and integral to the population and farming industry in California, especially the San Joaquin Valley, where during the prime growing season, farmland often receives little, if any, natural precipitation.[41] Irrigation in the region is immensely depended on and only derived from a few sources, increasing the risk of contamination and hindering a response measure that could prevent mass crop devastation.[42] Even the threat of cyanide or other liquid spread contaminants could pose a threat to thousands of acres along the San Joaquin Valley irrigation structures.[43]

B. Hooved Livestock as a Target

Aside from an irrigation disruption affecting crops, California has a separate vulnerability because of the large presence of livestock.[44] Non-zoonotic diseases, diseases that are not spread between animals and hu-

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[38] *See id*.

[39] *See id*. at 3, 8.

[40] *See id*. at 8.

[41] *Study Unit Description*, U.S. GEOLOGICAL SURVEY, http://ca.water.usgs.gov/sanj/sanj.html (last visited September 19, 2012) (showing average precipitation in San Joaquin Valley ranging from five to fifteen inches annually).

[42] *See generally* Staff Report, *Agricultural Water Use in California: A 2011 Update*, THE CENTER FOR IRRIGATION TECHNOLOGY (California State University Fresno, 2011), *available at* http://www.californiawater.org/docs/CIT_AWU_Report_v2.pdf.

[43] Jim Green, *Cyanide Spill Reveals the Cost of Gold*, GREEN LEFT (Feb. 23, 2000), http://www.greenleft.org.au/node/23035 (explaining how contaminated irrigation water posed risks to animals and humans).

[44] Marla Cone, *Foul State of Affairs Found in Feedlots*, L.A. TIMES, Nov. 17, 2006, http://articles.latimes.com/2006/nov/17/nation/na-livestock17.

mans, can devastate an animal population not only on a single farm or feedlot, but quickly affect an entire region due to the nature of the food distribution system in the United States.[45] California has a large number of high-density feedlots housing thousands of head of cattle.[46] This large-scale commercial beef production in a concentrated setting is made possible because of the ability to transport both live animals and meat products across state lines in a short period of time.[47] With these market advantages comes the high risk of spread of contagious disease due to the density and close proximity of livestock.[48]

The threat considered to be most probable is a disease not foreign to the United States at all, and a disease that has posed concerns before.[49] Hoof and mouth disease (also referred to as foot and mouth disease or FMD) is highly contagious among hooved animals and renders the animal unable to stand, eat, drink, or produce milk, ultimately resulting in the death or culling of the animal.[50] Although not capable of causing significant harm to humans directly, humans can carry the disease and spread it to other animals.[51] Tactically, from a terrorist point of view, this is ideal because there is no loss of human life in the contamination process because the person in possession of the disease is not at risk to be harmed.[52] Access to the disease would be quite easy because it is still prevalent in many rural and impoverished nations.[53] Analysts agree that any person who finds an animal with the live virus could literally just wipe mucus from the animal's nose, preserve it for travel in a jar, then stop on side of some rural California highway by a feedlot and wipe the mucus onto another animal.[54]

Hoof and mouth disease is so contagious, it can also spread through the air at a range of nearly fifty miles and can remain infectious in the soil or hay for up to a month.[55] The highly infectious nature of hoof and

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[45] *See* Olson, *supra* note 16, at 2, 4, 5.

[46] *See* Cone, *supra* note 44 (detailing that California has more than 2,000 facilities with at least 300 livestock animals each, half of them with more than 1,000, according to a 2002 estimate by the U.S. Environmental Protection Agency).

[47] Olson, *supra* note 20, at 5. (Meat travels 1,000 miles on average from farm to table because animals are often bred on large farms and transported out of state for slaughtering and processing.)

[48] *Id*.

[49] *See generally* Olson, *supra* note 20.

[50] *Id*. at 4.

[51] *Id*. at 4, 5.

[52] *See id*. at 4.

[53] *See id*.

[54] *Id*.

[55] *Id*.

mouth disease can cause animals to infect others before symptoms are apparent.[56] By the time the disease is known or suspected, it may have already spread off the farm and into other states via mass transit.[57] It's estimated that "[a foot and mouth disease] outbreak could spread to as many as [twenty-five] states in as little as [five] days simply through the regulated movement of animals from farm to market."[58] With commercial dairies in California housing on average 1,500 cows, and feedlots with thousands of cows in close proximity of one another, the risk of infection is great and the task of containment poses obvious challenges.[59]

Once hoof and mouth disease is identified, the animals must be killed and either burned or buried to prevent further spread of the disease.[60] As previously discussed, seven million animals infected in the United Kingdom in 2001 had to be slaughtered and burned.[61] The high volume mass slaughter of infected animals would not only cause a media scene among animal rights activists and the average consumer alike.[62]

VI. RESPONSE TO A SUSPECTED OR CONFIRMED CONTAMINATION

The effect of an agro-terrorism attack is immense, but can be prevented or at least mitigated by an aggressive and immediate response.[63] Currently, because agricultural attacks are not adequately covered by state legislation, California peace officers do not have concurrent jurisdiction to provide the quick response necessary.[64] When food or water is contaminated and a disease outbreak ensues, the response time for determining the source and the range of quarantine is imperative in halting the contamination and mitigating the risk and damage.[65] As we have seen recently from non-intentional disease outbreaks here in the United States, the vast infrastructure of food cultivation, processing and shipping can slow identifying the origin of food products.[66] When a *Salmonella* outbreak was realized and eventually tracked to a peanut butter

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[56] *Id*.
[57] *Id*.
[58] *Id*.
[59] *Id*. at 4, 5.
[60] *See id*. at 5.
[61] *Foot-and-mouth Crisis Remembered*, *supra* note 2.
[62] *See* Olson, *supra* note 20, at 5.
[63] *See generally id*.
[64] CA B. An., *supra* note 9.
[65] *See generally* Olson, *supra* note 20, at 4-7.
[66] *See generally id*. at 6.

processor in Georgia, 300 people had already been reported sick.[67] Two hundred others were sick before an *E. coli* contamination was linked back to California spinach.[68] Because of the response time in identifying the source of the threat, a serious contamination could halt shipping and production nationwide until identified, interrupting the delivery of essential products for days, if not longer.[69] Grocery stores typically only carry seven days' worth of perishable items at a time.[70] If a contamination were to occur that would interrupt the flow of meat or produce, or both, the nation's already growing food security issue would be exacerbated infinitely.[71]

VII. IMPORTANCE OF CALIFORNIA AGRO-TERRORISM LEGISLATION

Considering the gravity of an agro-terrorism attack and the vulnerabilities that California has specifically, agro-terrorism specific legislation is not only necessary but imperative. Indeed, it is the government's role to protect its citizens, especially under the umbrella concept of public health.[72] Even the Supreme Court of the United States has held that the protection of public health is the most important duty of the state as a sovereign power.[73] Legislation has been the key factor in budgets, program implementation, departmental cooperation, and the limits and breadth of which the government itself can implement effective food safety and anti-terrorism measures.[74] Only legislation can be used by the government to pre-emptively solve a potential crisis like an agro-terrorism attack and also protect its citizens before harm is done.[75]

While threats to American citizens and the agricultural economy are certainly a nationwide concern, it is still the responsibility of the state of California to put legislative measures in place to ensure the protection of

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[67] Bob Orr, *New Threat: Agro-terrorism*, CBS NEWS (Feb. 11, 2009), www.cbsnews.com/2100-18563_162-2483410.html.

[68] *Id*.

[69] Olson, *supra* note 20, at 6.

[70] *Id*.

[71] *See id*.

[72] *See generally* Richard A Epstein, *In Defense of the 'Old' Public Health: The Legal Framework for the Regulation of Public Health* 1-4 (John M. Olin Law & Economics, Working Paper No. 170, 2002), *available at* http://www.law.uchicago.edu/files/files/170-rae.old-public-health.pdf.

[73] *See generally* Jacobsen v. Mass., 197 U.S. 11 (1905).

[74] *See* Michael T. Roberts, Note, *Role of Regulation in Minimizing Terrorist Threats Against the Food Supply: Information, Incentives, and Penalties*, 8 MINN. J.L. SCI. & TECH. 199, 199-201, 208-211 (2007).

[75] *See generally id*. at 199-201.

its vital economic and social interests.[76] There are numerous federal agencies, programs, technological initiatives, and policies, but they do not integrate with state enforcement authorities or have a large impact at the farm level.[77] Federal law and programs initiated therein serve as effective guideposts for state legislation and initiatives, but "federal food safety statutes provide . . . broad authority to regulate the safety of the United States food supply [and] do not specifically authorize them to impose security requirements at food-processing facilities."[78] This gap between the federal legislation and actual local enforcement gives rise to the need for California state legislature to give concurrent jurisdiction and attention on the concept of prevention, response, and prosecution of agricultural issues such as agro-terrorism to ensure proper funding, focus, and attention to such an important risk.[79] This concept of concurrent jurisdiction is an opportunity for California state law to mirror, and where necessary improve on, federal law and give California peace officers the ability to implement and enforce agro-terrorism laws instead of relying solely on federal officers.[80]

Concurrent jurisdiction in the prevention and prosecution of agro-terrorism crimes is absolutely imperative because at the present time, California authorities do not have the legislative capacity to act in response to an agricultural threat because the most probable situations, the introduction of hoof and mouth disease for example, are not encompassed within state legislation.[81] This means that California would solely rely on a federal response and prosecution.[82] As previously emphasized, response time and enforcement is essential in dealing with these issues.[83]

VIII. THE HERTZBERG-ALARCON CALIFORNIA PREVENTION OF TERRORISM ACT

Recognizing the need for concurrent terrorism legislation generally, California enacted The Hertzberg-Alarcon California Prevention of Terrorism Act (hereinafter referred to as the "Hertzberg-Alarcon Act") in 1999 to create "a comprehensive scheme to control Weapons of Mass

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[76] *See generally* CA B. An., *supra* note 9.
[77] *See Monke, supra* note 15, at 55-58 (discussing Congressional legislation intended to respond to an agroterrorist attack).
[78] Roberts, *supra* note 74, at 216-217.
[79] *See* CA B. An., *supra* note 9.
[80] *Id*.
[81] *Id*.
[82] *Id*.
[83] *See* Olson, *supra* note 20.

Destruction ("WMD") – biological, chemical and nuclear weapons – and to punish those who use or possess such weapons, similar to federal law."[84] This initial attempt at California anti-terrorism legislation was somewhat progressive considering its enactment prior to September 11, 2001, when the term "weapons of mass destruction" was becoming more commonplace.[85] The mode and ability to execute an act of agricultural terrorism has become more apparent, as previously outlined herein, and California has not responded legislatively in any capacity to adequately protect the agriculture industry.[86]

The Hertzberg-Alarcon Act was introduced as California Assembly Bill 140 and recognized a real threat of terrorism that could have drastic impacts on the state of California and also emphasized the need for a California specific aim at preventing harm to the state.[87] The author of the Assembly Bill, Bob Hertzberg, reiterated the need for such statutory protections by stating:

> By placing this analog to the federal statutes in state law, [Assembly Bill] 140 will give California peace officers concurrent jurisdiction in situations involving WMDs which means that they will be able to work to prevent or interdict these acts before disaster strikes . . . . With Assembly Bill 140, state, county and city law enforcement agencies will be able to take actions against such incidents instead of having to wait for the "Feds."[88]

His argument in support of this piece of legislation draws to the heart of why it is so important for the state of California to have its own comprehensive anti-terrorism legislation.[89] The Hertzberg-Alarcon Act not only can incorporate the language already in place at the federal level, but also encourage and facilitate an actual need-based response at the farm level through the concurrent jurisdiction given to local authorities.[90]

Currently, the Hertzberg-Alarcon Act creates California anti-terrorism law in order to allow the exercise of concurrent jurisdiction for certain terrorism crimes occurring in or relating to the state of California.[91] The Hertzberg-Alarcon Act defines and describes what constitutes a WMD and prescribes the punishments for credible threats that could cause great

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[84] CA B. An., *supra* note 9.
[85] *Id*.
[86] *See supra* Part VII.
[87] CA B. An., *supra* note 9.
[88] *Id*.
[89] *Id*.
[90] *Id*.
[91] *Id*.

bodily injury or death.[92] The Hertzberg-Alarcon Act sought to parallel existing federal anti-terrorism laws, incorporating the conspiracy element and expanding terrorism crimes to include weapons of mass destruction.[93] As such, this also prohibited the use of biological agents or toxins that could potentially be used as a weapon of mass destruction.[94]

IX. LEGISLATIVE LANGUAGE BARRIERS

Current legislation paints a broad stroke definition of what a weapon of mass destruction actually encompasses for the purpose of the Hertzberg-Alarcon Act. A weapon of mass destruction includes "chemical warfare agents, weaponized biological or biologic warfare agents, restricted biological agents, nuclear agents, radiological agents, or the intentional release of industrial agents as a weapon, or an aircraft, vessel, or vehicle . . . which is used as a destructive weapon."[95] This definition certainly encompasses threats that are most common and would include any terrorist attacks which have been threatened or acted out in the last decade or so.[96] This broad definition would include airplane hijackings, threats of anthrax, mustard gas, and other nationally recognized methods that have received media attention or have become popularly known historically.[97]

Wherein the problem lies with this definition, is that the broad sweeping definition of a weapon of mass destruction does not anticipate an attack on the agricultural industry.[98] To take one possibility as an isolated example, hoof and mouth disease is not a chemical, nuclear, or radiological agent.[99] The only category that would even come close to including a contagious disease is as a weaponized biological agent.[100] However, the Hertzberg-Alarcon Act in itself defines a weaponized agent

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[92] The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11417 (West 2002)

[93] CA B. An., *supra* note 9.

[94] *See* The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11417(a)(3) (West 2002)

[95] The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11417(a)(1) (West 2002)

[96] *See generally* Gary LaFree, *The Global Terrorism Database: Accomplishments and Challenges*, PERSPECTIVES ON TERRORISM, 2010, *available at* http://www.terrorismanalysts.com/pt/index.php/pot/article/view/89/html.

[97] *See id*.

[98] *See generally* Cal. Penal Code § 11417(a)(1).

[99] Olson, *supra* note 20, at 4 (describing hoof and mouth disease as a pathogenic agent and therefore contagious virus).

[100] *See* The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11417(a)(6) (West 2002)

as "those agents or substances prepared for dissemination through any explosive, thermal, pneumatic, or mechanical means."[101] Hoof and mouth disease, while possible to spread through the air from one animal to another, is a highly contagious disease spread mostly from animal to animal through contact with contaminated matter.[102] This "agent" is not explosive, not spread by heat, or by mechanical means.[103] It therefore simply escapes the weaponized biological agent definition.[104] An infectious disease among livestock is not included as a weapon of mass destruction because in essence agricultural terrorism was neither a driving factor nor large consideration of the intent behind the Act.[105] Even more surprising, is that the malicious introduction of hoof and mouth disease has been widely published by analysts as a highly destructive threat that would have disastrous effects.[106]

Another issue in the way that the Hertzberg-Alarcon Act seeks to define terrorism crimes arises in use of the term "used as a destructive weapon."[107] According to the Hertzberg-Alarcon Act, this term "means to use with the intent of causing widespread great bodily injury or death by causing a fire or explosion or the release of a chemical, biological, or radioactive agent."[108] This is a broad approach, but again falls short of any protection of the agricultural industry.[109] By using the term "bodily injury," the Hertzberg-Alarcon Act unintentionally only encompasses bodily harm to *humans* while leaving the possibility of harm to crops or livestock out of the discussion.[110] This particular definition expressly suggests that destructive weapons can only be used to harm people and ignores the possibility that an economic disaster, while not causing widespread bodily injury, is also a consequence of terrorism and related attacks.[111] Arguably, the introduction of a contagious disease which could affect millions of animals in a way that must only result in their death and destruction may not physically harm any human directly, but the

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[101] *Id*.
[102] Olson, *supra* note 20, at 4 (describing hoof and mouth disease as being spread primarily by mucus or airborne transmission).
[103] *See id*.
[104] *See* discussion *supra* Part IX.
[105] *See generally* CA B. An., *supra* note 9.
[106] Monke, *supra* note 15, at 46 "[Foot and mouth disease] is probably the most frequently mentioned disease when agroterrorism is discussed. . . ."
[107] The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11417(a)(7) (West 2002)
[108] *Id*.
[109] *See id.*
[110] *See id*.
[111] *See* Monke, *supra* note 15, at 2-4.

financial impact of such an attack would indirectly have an immeasurable impact.[112]

There is one definition in the Hertzberg-Alarcon Act that makes an attempt to foresee and prevent an attack against livestock, making it applicable to agro-terrorism on its surface. The subsection further elaborating the term "used as a destructive weapon" prescribes that:

> "The intentional release of a dangerous chemical or hazardous material generally utilized in an industrial or commercial process shall be considered use of a weapon of mass destruction when a person knowingly utilizes those agents with the intent to cause harm and the use places persons or *animals* at risk of serious injury, illness, or death, or endangers the environment."[113]

This is the first time in the definitions of the Act that a term is interjected that would indeed provide some level of inclusion with respect to agricultural terrorism because the term animals would obviously include livestock.[114] However, inclusion of livestock in this particular subsection still falls short with regard to the actual realistic threats of attack or most probable modes of attacking livestock.[115] This subsection limits its application to dangerous chemical or hazardous material in the industrial or commercial process, and inexplicably leaves out the possibility of biological agents.[116] Biological agents, especially communicable diseases or other agents spread between animals like hoof and mouth disease would be the most probable and most effective method of affecting a large population of animals.[117] Also, limiting the dangerous chemicals and materials to those generally used in industrial and commercial processes further limits the application of this subsection and creates an even larger gap of possibilities not covered by the Hertzberg-Alarcon Act.[118] The definitions in the Hertzberg-Alarcon Act clearly are aimed at the traditional terrorist attacks most commonly threatened or enacted, and the mention of animals in this particular subsection still does not bring focus to the need for agricultural protections.[119]

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[112] *See id*.

[113] The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11417(a)(7)(b) (West 2002) (emphasis added).

[114] *Id*.

[115] *See generally* Olson, *supra* note 20.

[116] *See* PENAL CODE § 11417(a)(7)(b).

[117] *See* Monke, *supra* note 15, at 27.

[118] *See supra* Part IX.

[119] One indication of the legislative intent is the California Bill Analysis, which never mentions the protection of crops or animals as a purpose of the legislation. *See* CA B. An., *supra* note 9.

The section of the Hertzberg-Alarcon Act that actually seeks to restrict and punish the possession, threat, or use of weapons of mass destruction contains various sections which in some ways protect some facets of the agricultural sector, while only in limited ways.[120] A majority of the sections explicitly limit their application to harm done to human beings or *another person*.[121] However, there is one particular provision that at first glance seems specifically formulated in anticipation of the need to protect the agricultural sector.[122] The Hertzberg-Alarcon Act states, "Any person who uses a weapon of mass destruction in a form that may cause widespread damage to or disruption of the food supply or 'source of drinking water'. . . shall be punished by imprisonment . . . ."[123] This initial mention of damage to the food supply would seem to be applicable to the agricultural sector, encompassing a threat to crops or livestock.[124] The problem then arises in the description of a weapon of mass destruction because the definition does not encompass some very viable threats, such as the intentional spread of a contagious disease, and without satisfaction of that particular definition and term of the provision, the applicability falls short of actually protecting the food supply.[125] It is clear that the legislature intended for this provision to be sufficient, but the threat of agro-terrorism is so broad and expansive, and so easily escapes the definition of a weapon of mass destruction, that this provision essentially fails to include the most realistic and probable threats to the food supply.[126] By limiting the provision to the use of weapons of mass destruction against the food supply, all other attacks which do not explicitly fall within that definition previously expressed are not covered by the only piece of anti-terrorism legislation in place in California.[127]

That same issue arises in section 11418(b)(4) when the Hertzberg-Alarcon Act states that, "Any person who maliciously uses against animals . . . a weapon of mass destruction in a form that my cause widespread damage to or substantial diminution in the value of stock animals . . . shall be punished. . . ."[128] The insertion and use of the term

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[120] The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11415 *et seq.* (West 2000)
[121] *Id*.
[122] *Id*.
[123] The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11418(b)(3) (West 2002)
[124] *Id*.
[125] *Id*.
[126] *See id*.
[127] *See* CA B. An., *supra* note 9.
[128] The Hertzberg-Alarcon California Prevention of Terrorism Act, CAL. PENAL CODE § 11418(b)(4) (West 2002).

"weapon of mass destruction" is essentially what this provision, like the others in the Hertzberg-Alarcon Act, completely hinges upon in its application.[129] While clearly the intent to put some sort of protective measures in place is present, without qualifying as a weapon of mass destruction, the entire provision fails to protect against the threats outside the term, such as hoof and mouth disease.[130]

The Hertzberg-Alarcon Act for its time was a bona fide attempt to create a comprehensive framework to protect the state's interest from terrorist attacks.[131] This attempt, however, did not truly take into consideration the very real threat to such an integral part of the California lifestyle and economy, the agricultural sector.[132] It is easy to get stifled by the mindset that weapons of mass destruction have triggers or explode, when in reality there are equally dangerous modes of damaging a state, or even a nation, which would not fall squarely within the definition proscribed by the Hertzberg-Alarcon Act and therefore out of the protections that it seeks to provide.

X. COMPARABLE STATE AGRO-TERRORISM LEGISLATION

In reality, the world has changed very much since 1999.[133] The breadth and modes of terrorist attacks are ever evolving, and as such, so should the legislation intended to protect from foreseeable threats or attack.[134] Considering the depth of agriculture to the state of California, this should be a top priority.[135] In fact, specific legislation regarding agro-terrorism is not just an idea or concept, but other states have indeed enacted specific statutes to protect their agricultural interests.[136] Compared to other states, California is lacking the legislative protection of

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[129] *See id.*

[130] *See generally* CA B. An., *supra* note 9.

[131] *See id.*

[132] *See* CA B. An., *supra* note 9 (indicating that the initial bill analysis which enacted the Hertzberg-Alarcon Act never expressed a clear intent to prevent or punish a threat specifically to the agricultural sector).

[133] *See* Gary LaFree, *supra* note 96 (noting that terrorist attacks worldwide have increased considerably since the attacks on the World Trade Center and Pentagon on September 11, 2001).

[134] *See generally* Roberts, *supra* note 74, 199-201, 208-211.

[135] *See infra* Part III; *see generally California Department of Food and Agriculture: 93 Years Protecting and Promoting Agriculture in the Golden State*, *supra* note 11.

[136] *See*, *e.g.*, VA. CODE ANN. § 18.2-46.7 (West 2002) ("Act of bioterrorism against agricultural crops or animals"); S.C. CODE ANN. § 46-9-120 (West 2002) ("Reporting of agricultural product diseases caused by chemical or other terrorism"); S.C. CODE ANN. § 46-7-100 (West 2002) ("Reporting animal diseases caused by chemical or other terrorism"); IND. CODE ANN. § 35-47-12-2 (West 2002) ("Agricultural terrorism").

agriculture, which is unforgivable considering the impact an attack could have.

A. South Carolina

In South Carolina, the agriculture sector is the top contributor to the state's economy.[137] The estimated impact on the economy is roughly $33.9 billion annually, three billion less than California, excluding services and related industry activity.[138] Still, South Carolina has something that California does not. South Carolina has reporting requirements for any animals, crops or products suspected of being contaminated or having a disease caused by chemical terrorism, bioterrorism, radiological terrorism, epidemic or pandemic disease or other infections agents.[139] This duty to report suspected threats or illnesses related to the health and wellbeing of crops and animals falls upon any individual in the care or related to the care of an animal or production and processing of a crop.[140] The legislation ensures that such a report must be made within twenty-four hours of its suspicion or detection and made to the State Veterinarian, who in turn reports the threat to the Department of Health and Environmental Control.[141] From that point, it can be determined whether a public health emergency occurs, and immediate action can be taken.[142] Here, South Carolina has ensured that it has the authority and protocol to respond to an agro-terrorism threat and protect its vital state interests.

While South Carolina also lacks an agro-terrorism statute specifically and also does not define a weapon of mass destruction in a way that would encompass such an attack or threat,[143] the state legislature has gone one step further than California by recognizing the possibility of a contagious disease capable of affecting large numbers of livestock.[144] In South Carolina, this reporting requirement not only mandates the commencement of a structure and puts a plan in place to respond to a threat

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[137] *SC Agribusiness*, SOUTH CAROLINA DEPARTMENT OF AGRICULTURE, http://agriculture.sc.gov/content.aspx?MenuID=18 (last visited September 19, 2012).

[138] *See id.*

[139] S.C. CODE ANN. § 46-9-120 ("Reporting of agricultural product diseases caused by chemical or other terrorism"); S.C. CODE ANN. § 46-7-100 ("Reporting animal diseases caused by chemical or other terrorism").

[140] S.C. CODE ANN. § 46-9-120; S.C. CODE ANN. § 46-7-100.

[141] S.C. CODE ANN. § 46-7-100 (requiring geographical location of the animal or the exposure).

[142] *Id.*

[143] *See generally Id.*

[144] *See id.; see supra* Part V, Section B.

but also recognizes the possibility of a livestock disease as a real risk worthy of legislative attention.[145] This requirement is a step in the right direction, not against prevention, but as a necessary response for containment, quarantine, and mitigation of the damage caused by contagious disease.[146] The reporting requirement also does not narrowly define its application to bioterrorism, chemical or radiological terrorism, but specifically acknowledges the possibility of epidemic or pandemic disease or other infectious agents, clearly recognizing the most probable threats and modes of intentional harm posed to livestock.[147]

B. Indiana

The state of Indiana attributes $25 billion to the state economy from its agriculture sector.[148] While smaller in comparison to that of California, or even South Carolina, it is still one of the top ten food producers nationally.[149] Growing ever more important, Indiana ranks fifth in production of corn and soybeans.[150] The agriculture sector is immensely important to the state, and in the wake of the September 11, 2001, terrorist attacks, they adopted an agricultural terrorism statute specifically in an attempt to protect its vital agricultural interests from attack.[151] Like the California statutes, Indiana prohibits the use of a weapon of mass destruction against crops or livestock.[152] The Indiana statute forbids the use of a "weapon of mass destruction with the intent to damage, destroy, sicken, or kill crops or livestock of another person without the consent of the other person commits agricultural terrorism. . . ."[153] Indiana further defines that a weapon of mass destruction may include a biological device or organism, but whether it would be effective in applying the term weapon of mass destruction to probable threats such as communicable diseases remains questionable.[154] In this scenario, Indiana has made an

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145 S.C. CODE ANN. § 46-7-100.
146 *See Id.*
147 S.C. CODE ANN. § 46-7-100 ("Every . . . person having the care of animals must report animals having or suspected of having any disease that may be caused by chemical terrorism, bioterrorism, radiological terrorism, epidemic or pandemic disease, or novel and highly fatal infectious agents . . . .").
148 *Indiana State Department of Agriculture*, NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE, http://www.nasda.org/cms/8769.aspx (last visited September 19, 2012).
149 *Id.*
150 *Id.*
151 IND. CODE ANN. § 35-47-12-2.
152 *Id.*
153 *Id.*
154 *Id.*

attempt to provide individual and specific protection against an agro-terrorism threat, but the statute may fail in the same respects that the California statute does in that it ignores that the most probable threat, an infectious disease, may not fall squarely into the language of the statute.[155] The intent behind the statute is unquestionable; but the effectiveness, like other agricultural statutes nationwide, may be at stake.

C. Virginia

The Commonwealth of Virginia is to the East what California is to the West, an agricultural epicenter.[156] Known historically for its cultivation of tobacco, a smooth transition to modern farming now contributes $55 billion annually to the state economy.[157] Virginia parallels California in that it is not only a large producer of crops and livestock, but there is an emphasis on the importance of agriculture and its effect on the state does not go unnoticed.[158] Virginia's agro-terrorism statutes are some of the most aggressive and comprehensive in protecting against agro-terrorism specifically.[159] The Code of Virginia provides:

> Any person who maliciously destroys or devastates agricultural crops or agricultural animals having a value of $2,500 or more through the use of an infectious biological substance with the intent to (i) intimidate the civilian population or (ii) influence the conduct or activities of the government of the United States, a state or locality through intimidation, is guilty of a Class 3 felony.[160]

Further, the Code specifically defines, "For the purposes of this section 'agricultural animal' means all livestock and poultry as defined in § 3.2-5900 and 'agricultural crop' means cultivated plants or produce, including grain, silage, forages, oilseeds, vegetables, fruits, nursery stock or turf grass."[161] The reason this law is particularly effective is because it removes the over-arching, and somewhat diminutive in this context, term of weapons of mass destruction.[162] Removing the criteria for weapons of mass destruction allows the application of the statute in scenarios where the mode of attack does not consist of a chemical or radiation agent, but

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155 *See generally id.*; IND. CODE ANN. § 35-31.5-2-354 (West 2012).
156 *See infra* Part X, Section C.
157 *Virginia Agriculture - Facts and Figures*, VIRGINIA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, http://www.vdacs.virginia.gov/agfacts/index.shtml (last visited September 19, 2012).
158 *See generally id.*
159 VA. CODE ANN. § 18.2-46.7.
160 *Id.*
161 *Id.*
162 *See id.*

simply has the intent to destroy some part of the agricultural economy, whether livestock, crop or otherwise.[163]

This approach is essential in that it acknowledges that terrorism is not always a consequence of a weapon of mass destruction per se.[164] Mass destruction may very well result, but the term should not be allowed to minimize the array of methods by which such destruction may be caused. This Code of Virginia legislation encompasses any known conceived threats to agriculture in the state by simply naming the intentional, malicious destruction of animals or crop of a certain value without the conundrum and implications of a weapon of mass destruction designation.[165] Further, the statute acknowledges that an infectious substance or disease is a real threat to this type of agricultural asset, namely livestock and crops.[166]

XI. RECOMMENDATIONS

As shown, legislation in California needs to be revised to include some very realistic and probable threats to the agricultural sector. This comment has focused primarily on the threat most anticipated by scholars and researchers as being the intentional dissemination of a contagious disease, such as hoof and mouth disease.[167] Therefore, it is imperative that California enact a new and comprehensive body of legislation to address this possibility. The most crucial characteristics of effective agro-terrorism legislation would be a reporting requirement to ensure adequate response measures are in place and a statute that omits the term weapon of mass destruction as to not limit the application of the legislation.[168] The most all-encompassing legislation would mimic South Carolina's reporting requirements, which ultimately place responsibility on those people who are actually involved in the crops and livestock at the production level and mandate the reporting of any suspected contamination within a timely matter to help contain and isolate a threat and thereby mitigate damages.[169] California must also enact an agro-terrorism section that describes an act of terrorism mirroring that of the

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[163] *See generally* Monke, *supra* note 15.
[164] *See generally id*.
[165] *See* VA. CODE ANN. § 18.2-46.7.
[166] *See id*.
[167] *See generally* Olson, *supra* note 20.
[168] *See, e.g.*, S.C. CODE ANN. § 46-9-120 (requiring reporting of agricultural product diseases caused by chemical or other terrorism), S.C. CODE ANN. § 46-7-100 (requiring reporting of animal diseases caused by chemical or other terrorism).
[169] S.C. CODE ANN. § 46-9-120; S.C. CODE ANN. § 46-7-100.

Virginia statute and abandons the term of weapons of mass destruction so that the applicability of the statute is not confined to the most probable preconceived methods of terrorism, but can evolve with the threat.[170]

XII. CONCLUSION

The importance of legislative protection cannot be understated. An evolving and mounting threat to the underpinnings of the state economy must be taken into consideration legislatively. The Hertzberg-Alarcon California Prevention of Terrorism Act is not only in need of updating and revision, but a specific section regarding the most likely agro-terrorism threats must be codified so that California can give the issue the focus and jurisdiction that it requires. Legislation has the authority and power to mitigate risks and damages before they arise, and ensure the health and safety of the state and its economic well-being.

As far as state agro-terrorism statutes, Virginia has the most comprehensive statute which considers the most likely threat to crops and livestock.[171] South Carolina's reporting requirement sets into place a mitigating measure and gives some attention to the possibility of intentionally dissemination of a disease.[172] It is time for California, being the leading producer of agricultural products, to lead the nation in agricultural statutory protections.[173] A revision of the existing Hertzberg-Alarcon Act or an agro-terrorism section specifically, would increase awareness, provide concurrent jurisdiction for local government authorities, and close the gap between what was previously conceived as a weapon of mass destruction, and the infectious biological agents which pose the most probable threat to the state. With such measures in place paired with a reporting requirement to higher authorities, California can take one step further towards protecting its vital agricultural infrastructure and resources to evolve and update its outdated notions of what constitutes a terrorist attack within the state.

E. NICOLE KOZYCKI[174]

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[170] *See Id.*
[171] *See Id.*
[172] *Id.*
[173] *See California Agricultural Production Statistics*, *supra* note 26.
[174] J.D. Candidate, San Joaquin College of Law, May 2014. This Comment is dedicated to my husband, Tony, who was deployed for the bulk of this process combating terrorism in his own way. His unwavering love and support made this Comment possible.