

A County Animal Security and Health Network (CASHN) for Early Detection/Rapid Response to Foreign and Zoonotic Animal Diseases

National Center for Foreign Animal and Zoonotic Disease Defense

Texas A&M University – University of California at Davis – University of Southern California – University of Texas Medical Branch

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Subject: 1890 and 1994 Cooperative Extension Program led pilot test of a County Animal Security and Health Network (CASHN) concept developed by the National Center for Foreign Animal and Zoonotic Disease Defense (FAZD) to protect the U.S. agriculture and food infrastructure by connecting non-commercial livestock and poultry owners with veterinary information for early detection and rapid response. Non-commercial is defined as hobby, “backyard,” and small-enterprise animal owners.

The County Animal Security & Health Network (CASHN) Concept

Non-commercial livestock and poultry owners (NLPO) have been identified by FAZD as a vital but difficult audience to reach for the protection of our agricultural infrastructure. For example, veterinarians believe that the 2003 Exotic Newcastle Disease (END) outbreak, which critically impacted California’s poultry industry, flourished for nearly six months in backyard flocks before diagnosis and detection occurred. By which time, the depopulation of poultry was entering the millions. Early detection and reporting by NLPO could significantly have mitigated the resultant damage to individual farmers and the agricultural infrastructure in California.

Historically, foreign and zoonotic animal disease outbreaks in other countries have been responsible for tremendous economic losses to livestock industries, overwhelming health issues in affected human populations, and devastating sociologic and economic effects experienced by communities. To prevent the United States from experiencing similar debilitating losses, early detection and rapid reporting is essential. Individual livestock owners must be our first line of defense against a foreign animal or zoonotic disease outbreak. By implementing biosecurity practices, livestock owners could potentially reduce the threat to the agricultural infrastructure (F. C. Faries, DVM and A. I. Dement, personal communications, May 21, 2007). "They must keep a sharp eye on livestock and promptly report any unusual signs of disease. Early detection and reporting could prevent the loss of [life and/or] billions of dollars for our livestock industries and communities" (Faries and Dement, 2006, p. 1 - 2).

A 2006 FAZD needs assessment conducted in three Texas regions discovered that feed retail managers are the most common conduit for communicating about animal health and nutrition topics with NLPO communities in urban and rural settings. It was proposed that a two-way emergency education and communications network would contribute to the critical agricultural infrastructure protection goals and commercial interests of DHS, USDA, state animal health agencies, state land-grant universities, commercial animal industries, private veterinarians, county extension agents, and feed retail managers.

During fall 2007 and spring 2008 the FAZD Center and collaborating land-grant Cooperative Extension programs in 6 states throughout the Southern Region will conduct a ‘proof-of-concept’ project creating a functioning emergency education and communications network called **County Animal Security & Health Network (CASHN)** reaching individual small-enterprise producers in non-commercial communities with vital animal disease information. This proof-of-concept will be led by 6 land-grant universities’ Cooperative Extension programs (1-1994 land-grant university, 5-1890 land-grant universities), approximately 72 county extension educators, and 1000 feed retail managers across 72 U.S. counties and numerous tribal villages.

Scenarios for this ’07-’08 pilot study will feature poultry, livestock and equine disease issues because feed retail managers may serve particular animal industry segments. If adopted nationally following the CASHN pilot study, the emergency education and communications network will be poised to address other key animal diseases and prioritized agro-terrorism animal disease related issues.

In concept, a national the emergency education and communications network could be established and maintained through fostered relationships with feed retail managers by county-based Cooperative Extension educators across all 3066 U.S. counties. Essential education and/or foreign and zoonotic animal disease alerts would reach feed retail managers and their customers rapidly and effectively throughout the United States through telephone, fax and email originated by State Veterinarians to State Extension directors/program leaders. State Extension directors/program leaders would transmit the educational information or disease alerts to their county and tribal Extension educators among the 1890, 1994, and 1862 land-grant universities. These Extension educators would transmit the educational information or disease

alerts to their local feed retail managers who would distribute the educational information or disease alerts to their customers.

State and county adoption of the emergency education and communications network would provide DHS, USDA, and state animal health authorities' efficient access to an established Cooperative Extension communications infrastructure reaching NLPO for prevention, early detection, early reporting, and recovery--significantly mitigating the risk and impact of catastrophic foreign animal and zoonotic diseases through disease education and timely alerts.

The County Animal Security & Health Network Model

In this pilot study, the state veterinarian in each state will activate CASHN by contacting the State Extension Program Leaders by email, text message, and follow-up phone call (see A on chart below). If the state veterinarian is unavailable in critical and timely situations, the associate/assistant state veterinarian will act in his or her stead as a secondary contact.

State Extension Program Leaders will forward the information and/or alerts by email and text message to their 12 participating Extension Educators (B). State Extension Program Leaders will also forward the information and/or alerts to their Regional Program Directors and District Extension Educators to keep them current on the situation. Regional Program Directors and District Extension Educators will not be expected to forward messages or contact personnel regarding the information and/or alerts. If either State Program Leader for Extension is unavailable in critical and timely situations, each will have a designated administrative assistant with the authority to monitor the network and forward information and/or alerts in his or her stead.

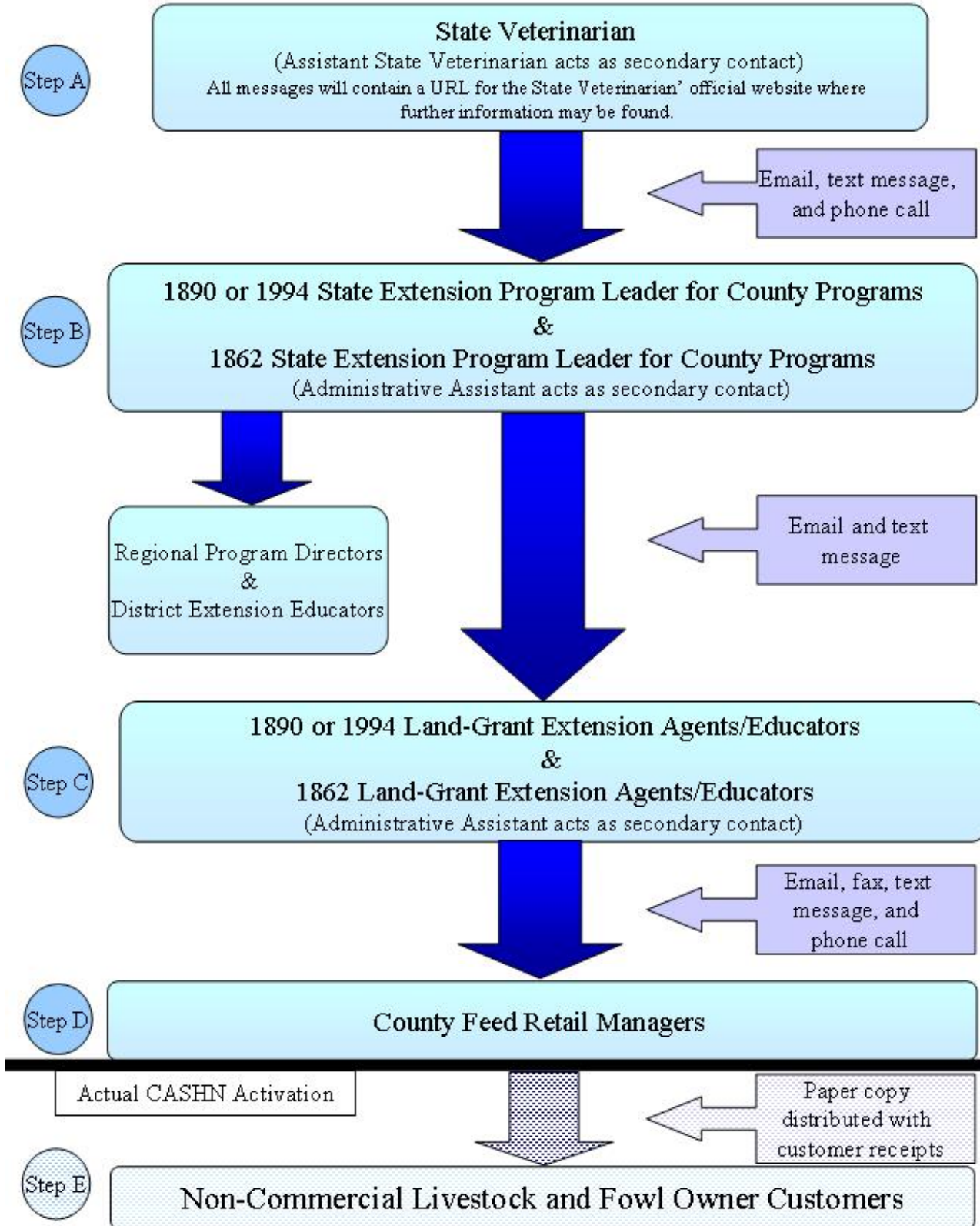
Extension educators will contact all participating feed retail managers in their county and forward the information and/or alerts by email, fax, text message, or phone call (C). If the County Extension Educator is unavailable in critical and timely situations, each will also have a designated administrative assistant with authority to monitor the network and forward information and/or alerts in his or her stead.

For the pilot test, participating feed retail managers will only record the date and time they received the information and/or alerts in order to determine efficiency of the CASHN system for delivery of timely information and/or alerts (D).

In an actual activation of CASHN, feed retail managers would distribute the information and/or alerts to their customers in the form of short, paper handbills at point of purchase with the customers' purchase receipt (D). Non-commercial livestock and poultry owner customers would receive alerts and educational materials (E).

In order for the pilot study to reveal feed retailers capacity to reach customers via telephone, fax and email rapidly, participating feed retail managers will provide historical time-series data on their feed store customer population prior to the CASHN pilot test. This historical data will be used to estimate the potential number of customers reached by feed retail managers in the event of an actual activation of CASHN (E).

**County Animal Security & Health Network (CASHN)
Pilot Test**



CASHN Project Plan

Phase 1: CASHN Leadership Development for State and County Personnel

1. Participating county Extension educators, State Extension Program Leaders, and FAZD POCs from all participating states will register; make travel arrangements for; and attend a CASHN Extension educator training in October (Date and Location TBA). County Extension educators' travel will be reimbursed by FAZD. State Extension Program Leader and FAZD POC travel should be encumbered within the budget of your institution's subcontract.

Phase 2: CASHN Feed Retailer Recruitment

2. County Extension educators will identify and provide CASHN instruction to feed retail managers throughout their county. The goal will be to gain the commitment of feed retail managers to participate in the CASHN pilot project as described below.
3. County Extension educators will conduct feed retail manager interviews and surveys to gather base-line data and elicit feed retail manager informational needs.
4. County Extension educators will collect feed retail managers' historical data on average number of customers served weekly during four pre-selected weeks of the year.
5. Each Extension educator will conduct at least one CASHN educational seminar in the county. The seminar should be hosted by one or more feed retailers. The seminar should target approximately 25 non-commercial livestock and poultry owners. In the seminar, county Extension educators should inform animal owners about CASHN; share examples of information and/or alerts from the State Veterinarian; then gather customer feedback and evaluation of the customer perceived value and relevance of the CASHN concept. This data is essential to support Phase 4 below.

Phase 3: CASHN Pilot Test

6. During the testing phase of CASHN, State Extension Program Leaders and participating county Extension educators will monitor their messaging systems and transmit alerts and educational messages from the State Veterinarian to feed retail managers county-wide. Feed retailers will not be asked to transmit these messages to their customers.
7. During the testing phase of CASHN, participating county Extension educators, State Extension Program Leaders, State Veterinarians, and feed retail managers from all participating counties will report the date and time that the State Veterinarian's alerts and educational messages were received and transmitted to the next link in the network.

Phase 4: CASHN Evaluation and Reporting

8. State Veterinarians, State Extension Program Directors, FAZD POCs, county Extension educators and feed retail managers will be guided to provide the FAZD Center with summative evaluations of the CASHN concept, usefulness, feasibility, and effectiveness.

Evaluation data from county Extension educators, county educational seminars, CASHN delivery system data from the three alerts, and summative evaluations from CASHN participants will be analyzed and direct the production of white papers, CASHN reports to DHS and FAZD, and presentations at professional meetings of CASHN.

Results of the 6 state CASHN pilot test will be utilized to support the feasibility of establishing a national the emergency education and communications network linking state veterinarians and feed retailers and their customers through the existing Cooperative Extension network. Using Cooperative Extension as the transmission vehicle, a national network would have the potential of reaching NLPO in all 3,066 counties in the United State with vital and timely alerts and educational information to mitigate risks to the nation's agricultural infrastructure, securing the nation's food supply and economic stability.

CASHN Project Plan

Activity	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
P-1 CASHN County Extension Educator training								
P-2 Identify and gain feed retail manager commitments								
P-2 Conduct feed retailer pre-CASHN survey w/ historical info								
P-2 Extension Educators conduct CASHN educational seminar								
P-3 Deliver 1 st alert scenario								
P-3 CASHN reporting on date and time alerts received/sent								
P-3 Adjust CASHN alert system as needed								
P-3 Deliver 2 nd alert scenario								
P-3 CASHN reporting on date and time alerts received/sent								
P-3 Adjust CASHN alert system as needed								
P-3 Deliver 3 rd and final alert scenario								
P-3 CASHN reporting on date and time alerts received/sent								
P-4 Participant evaluation of CASHN								
P-4 Analyze data								
P-4 Write evaluation summary and disseminate results								