

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Food Safety: Animal Protection

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
307	Animal Management Systems	15%		0%	
311	Animal Diseases	85%		100%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	0.0	9.0	0.0
Actual	2.6	0.0	9.7	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
7428	0	40488	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
7428	0	40488	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
553871	0	1176469	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Workshops
 Applied and Basic Research
 Consultations
 Fact sheets

2. Brief description of the target audience

Commercial Poultry producers
 Back yard poultry producers
 4-H Youth
 School teachers

V(E). Planned Program (Outputs)

1. Standard output measures

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Plan	250	1500	0	0
Actual	400	2000	250	600

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2010
 Plan: 0
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2010	Extension	Research	Total
Plan	1	7	
Actual	10	18	28

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Workshops and conferences

Year	Target	Actual
2010	1	4

Output #2

Output Measure

- Fact sheets, bulletins and newsletters

Year	Target	Actual
2010	5	12

Output #3

Output Measure

- Websites developed

Year	Target	Actual
2010	1	5

Output #4

Output Measure

- Animal cases examined

Year	Target	Actual
2010	1300	1500

Output #5

Output Measure

- Disease surveillance programs implemented

Year	Target	Actual
2010	1	1

Output #6

Output Measure

- Books and monographs

Year	Target	Actual
2010	1	18

Output #7

Output Measure

- Conference abstracts

Year	Target	Actual
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2010 1 1

Output #8

Output Measure

- Presentations and short courses

Year	Target	Actual
2010	10	35

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Development of new recombinant vaccines
2	New diagnostic tests and approaches developed
3	Animal protection-related actions/procedures adopted and/or implemented by governmental and other entities at the international, national, regional, state and local levels.
4	Number of healthy backyard poultry flocks

Outcome #1

1. Outcome Measures

Development of new recombinant vaccines

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	1	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Vaccinia virus, (v.v.) the poxvirus used as the smallpox vaccine, led to the eradication of smallpox because it induces strong immune responses, is affordable and heat stable; it is also a vector for recombinant vaccines and have the potential to be developed as polyvalent vaccines expressing antigens from multiple infectious agents. Progress has been slow due to the small number of v.v. promoters available. Thus the need for a synthetic form is important.

What has been done

A number of combined early/late promoter sequences were designed to optimize promoter strength and sequence diversity with existing synthetic promoter sequences. This was accomplished by overlapping optimal minimal early and late poxvirus promoter sequences. These optimal sequences were derived from an extensive review of the literature on pox promoters.

Results

Although early in the project, positive outcomes include: 1)a number of new synthetic promoter sequences designed; 2)successful cloning of these sequences in the transfer vector for analysis of promoter activity; 3)all designed promoters were able to induce transcription of the reporter gene as attested by fluorescence microscopy of cells transfected with the transfer vectors. It is now possible to characterize the activity of the promoters in terms of strength and timing as well as their stability.

4. Associated Knowledge Areas

KA Code	Knowledge Area
311	Animal Diseases

Outcome #2

1. Outcome Measures

New diagnostic tests and approaches developed

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	1	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Connecticut is home to a very large poultry farm with several million birds, and seven poultry facilities located in five towns in eastern part of the state. The firm is the largest egg producer in the state, and one of the largest in the northeastern United States. It employs several hundred people, and has gross sales of close to \$90 million and reportedly supplies more than 90 percent of Connecticut's egg market. The company's large customers include major supermarket chains such as Wal-Mart, Stop & Shop, Big Y, Shaws, BJ's Wholesale, etc. Ensuring flock health is critical to both the local and state economy and public health. On the other end of the scale, there has been a steady increase in the number of backyard poultry flocks, primarily for egg production in rural, suburban and urban areas. Ensuring the health of these flocks is equally important, not only for economic reasons and general public health, but to maintain trust in the safety of agriculture in Connecticut.

What has been done

Rapid and accurate disease diagnosis of potentially affected poultry flocks will protect flocks from devastating diseases such as avian influenza, exotic Newcastle disease, and other viral and bacterial infections in the state of Connecticut. This is important for public health and economic reasons. Through the Avian Diagnostic Laboratory, student intern pathologists assisted with poultry and pet birds submissions by conducting postmortem examinations to determine cause of death or specific infection. Recommendations were provided on the control, treatment and vaccination programs against poultry disease findings to poultry farm owners. Advised the poultry/pet bird owners on the results of pathological examination for protection of the remaining birds. Also, provided training of intern student pathologists on the histopathological findings and bacteriological results. Work was done in conjunction with the Board Members of Connecticut Poultry Association (CPA) and State of Connecticut Agriculture Department. Through the

Extension Poultry Health Services responses were provided to frequent telephone calls from poultry, pet bird and game bird farms in the state, with information on current poultry vaccination and medical treatment programs for various viral and bacterial infections. Made visits to commercial poultry and game bird farms to discuss health and poultry management with producers to prevent further losses due to diseases. Served as Extension veterinary advisor with the CPA to discuss poultry health situations in the New England states and around the world and important diseases such as Avian influenza, Salmonella enteridis (SE) infection in poultry, and their potential human health implications. Provide information, on the control of SE and avian influenza contamination thorough cleaning, bio-security, pest management and possible vaccination programs. Provide information on the control of exotic Newcastle disease in commercial poultry and its implication due to an outbreak on international trades

Results

No major outbreaks of poultry related diseases.

4. Associated Knowledge Areas

KA Code	Knowledge Area
311	Animal Diseases

Outcome #3

1. Outcome Measures

Animal protection-related actions/procedures adopted and/or implemented by governmental and other entities at the international, national, regional, state and local levels.

2. Associated Institution Types

- 1862 Extension
- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The permitting process has been identified as the primary constraint to new development and expansion of the aquaculture industry. As such, any efforts to streamline the application and review process and educate stakeholders about these processes has the potential to improve

viability of aquaculture both locally and nationally

What has been done

The Connecticut Aquaculture Permitting Workgroup (UConn=chair; Connecticut Department of Agriculture, Connecticut Department of Environmental Protection, US Army Corps of Engineers) met regularly to discuss ways to streamline the permitting process for aquaculture in Connecticut. The group identified a new strategy to improve the permitting process for low-impact marine aquaculture projects. This process, to be implemented in May 2011, will drastically reduce the paperwork and reporting requirements for projects that have minimal impacts to navigation, protected habitats and endangered species. This will be a cost- and time-savings for producers and resource managers.

In addition, the UConn team member co-authored with the U.S. Army Corps of Engineers a book chapter entitled, "Balancing Economic Development and Conservation of Living Marine Resource and Habitats: The Role of Aquaculture Resource Managers?". That chapter was published in 2011 in the book "Shellfish Aquaculture and the Environment?" by Wiley Scientific Publishing. Faculty from UConn Marine Sciences created an outline and technical content for a website "Shellfish Aquaculture and the Environment ? Permitting Perspectives?". This website, targeted towards aquaculture producers and resource managers, will be published in 2011 by the National Oceanic and Atmospheric Administration National Marine Fisheries Service Aquaculture Program.

Results

The time taken to acquire aquaculture permits has been reduced from an average of 12 to 6 months. This is a time and cost saving for both the aquaculture producer and local, state and federal resource managers. In addition, several outreach products have been developed for the industry. Development and delivery of outreach products and presentations have allowed for improved producers' knowledge of the permitting process.

4. Associated Knowledge Areas

KA Code	Knowledge Area
311	Animal Diseases

Outcome #4

1. Outcome Measures

Number of healthy backyard poultry flocks

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	{No Data Entered}	60

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

As urbanization increases more youth and families are choosing to rear poultry for non-commercial use in New England. This includes chickens, ducks, turkeys, geese, gamebirds and other fancy fowl. In the spring of 2010 more than 88,000 baby chicks (meat type, layer type and fancy fowl), pullets and adult birds were purchased by small flock owners throughout the New England states. According to suppliers, they cannot keep up with the demand. Small flock owners are generally less experienced in the management of poultry and are more likely to mismanage the birds under their care, relative to proper nutrition, health care, humane treatment, breeding, transporting, and other management issues. The threat of avian influenza has heightened awareness of the need for proper biosecurity in rearing poultry. As a result more small flock owners are seeking information and education about AI and its affects. The focus was to educate small poultry flock owners about the proper management and health care of their poultry.

What has been done

More than 50 adult volunteer leaders helped with 4-H poultry projects and another 65 or more school teachers were involved indirectly through incubation and embryology projects. Also 13 UConn Poultry Science Club members were involved in volunteer work in setting up and running the 15th Annual Southern New England 4-H Poultry Show and Showmanship program. Support was provided to 4-H agents throughout CT and New England, as well as collaborations with tFFA, Farm Bureau, Connecticut Poultry Association, and the Connecticut Dept. of Agriculture on youth projects. Volunteers (47) were trained in emergency poultry rescue techniques at three workshops throughout Connecticut. These volunteers will help move poultry away from natural disaster sites or rescue them from situations of animal abuse. The participants in the SARE grant met for a three day workshop in October 2010 to learn about breeds of poultry, poultry housing, poultry nutrition and anatomy and physiology. A follow up webinar was also held to help establish discipline teams within the group. In addition, 11 small flock workshops were held during this time period with over 250 people in attendance learning the basics of choosing birds, housing, nutrition and basic health care of poultry. These were sponsored by several AGWAY Stores, by the Essex, CT library, and by the Henry Carter Hull Library in Clinton, CT.

Results

Through the following activities, the public is becoming aware of resources for learning to raise healthy flocks of poultry in backyards, which until recently, had disappeared from most areas. 124 youth participated in the 15th Annual Southern New England 4-H Poultry Show and Showmanship contest April 2010. In addition to maintaining two small poultry flock oriented web sites (<http://web2.uconn.edu/poultry/4-hpoultry> and <http://web2.uconn.edu/poultry/poultrypages>) the following activities were conducted during the period: 1 FFA Poultry and Egg Judging Contest, 34 youth; 1 Omelet making/food safety hands on demonstration at the Big E, with about 350 direct participants both youth and adults and several thousand observers. As a result of Youth and Non-Commercial Poultry Programs, there has been steady increase in interest in poultry rearing with over 250 people attending various workshops during this reporting period

seeking advice on purchasing, rearing, managing, etc. of small egg, meat or show bird flocks. Of the 237 plus contacts by phone or email, about 63 of these are new to poultry within the past year. The economic impact on CT and New England is considerable. Small flock owners purchase 50lb or 100 lb bags of feed at \$15 to \$20+ per bag. This is equivalent to \$400 to \$600 per ton of feed, which in bulk sells for about \$280 to \$400 per ton. This increased profitability to businesses carries through to other products for poultry rearing.

4. Associated Knowledge Areas

KA Code	Knowledge Area
311	Animal Diseases

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities

Brief Explanation

The complexity of local, state and federal regulations, and the economy are among the factors limiting the implementation of slaughter facilities in the state.

The ultimate goal of the program is safe food; however, the public and funders respond to food outbreaks that make the press, in terms of gaining additional funding.

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

- After Only (post program)
- Before-After (before and after program)
- Case Study

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}