

Animal Health and Disease

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Animal Health and Disease

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			1%	
311	Animal Diseases			72%	
502	New and Improved Food Products			1%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins			12%	
722	Zoonotic Diseases and Parasites Affecting Humans			1%	
723	Hazards to Human Health and Safety			13%	
	Total			100%	

V(C). Planned Program (Inputs)

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	2.3	0.0
Actual	0.0	0.0	2.4	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
0	0	37915	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	583332	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	2409710	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct Research Experiments.
- Assessments.
- Develop Products, Resources.

2. Brief description of the target audience

- farmers (terrestrial and aquatic), producers, ranchers
- veterinarians
- general public
- vaccine producers
- seafood producers
- microbial and medical researchers
- public health officials

V(E). Planned Program (Outputs)

1. Standard output measures

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	1000	0	0	0
2007	0	0	0	0

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

Patent Applications Submitted

Year	Target
Plan:	0
2007:	0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan			
2007	0	10	10

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

CARRY OUT STUDIES TO DECIPHER GENOMES, GENETICS AND MECHANISMS OF PLANTS AND ANIMALS - genomic sequencing and cloning of viruses (1a/b) and bacteria to understand protein generation and control and other molecular mechanisms of infection, expression, and spread

Year	Target	Actual
2007	4	4

Output #2

Output Measure

PROVIDE ADDITIONAL UNDERSTANDING FOR PLANT AND ANIMAL PROTECTION FROM DISEASES AND PESTS –diagnostic tools and effective vaccines, e.g, recombinant vaccine against influenza virus or potential experimental vaccine for Johne's disease – studies to establish the degree of permissiveness of pigs to infection with Asian strains of HPAI H5N1 and their potential role in the emergence of pandemic strains.

Year	Target	Actual
2007	2	2

Output #3

Output Measure

EFFECTS ON AND PROTECTION OF HEALTH Output Measure – efficacious chitosan bandages of different formulations for control of hemorrhaging and infection

Year	Target	Actual
2007	1	1

Output #4

Output Measure

SCHOLARLY excellence in referred articles, book chapters, and books; participation on professional boards and panels, as well as science panels.

Year	Target	Actual
2007	30	20

V(G). State Defined Outcomes

O No.	Outcome Name
1	Researchers gain information about how viruses and bacteria operate in animals and shellfish: - the different pathways for influenza occurrence and pathogenesis - genetic transformation system for <i>C. suis</i> . - molecular mechanisms underlying <i>Vibrio</i> bacterial-shellfish interaction - how SPO0A regulates CPE synthesis - <i>M. paratuberculosis</i> interacts with the intestinal mucosa
2	Knowledge obtained for diagnostic tools for detection and control - BVDV persistent infection in cattle and alpaca. - generation of recombinant vaccine for type A influenza virus
3	Medical personnel learn about merits of chitosan bandages
4	Industry adoption of new diagnostic methods and vaccine and bandage products - Vaccine production industry adopt breakthrough recombinant vaccine methods - Early treatment of BVDV would better control the disease - Adoption of chitosan bandages would help treat acute injuries - therapy and possibly the development of live, attenuated chlamydial strains for vaccination.
5	New techniques will change how we manage diseases - Understanding <i>Vibrio</i> ecology will change how the industry handles post-harvest treatment of shellfish - Better prevention of flu virus - More effective programs for public health measures, personal protection, and clinical therapies for flu - Better control over <i>Clostridium</i> , by modulating SPO0A-CPE interactions for therapeutic purposes - Better and more efficacious practices of prevention of Johne's disease within the cattle industry
6	Lives would be saved or made safer through recombinant flu vaccine, Chitosan-based bandages, and reduction/elimination of <i>Vibrio</i> presence in shellfish. Furthermore, preparedness in anticipation of zoonotic outbreaks of avian influenza and better health promotion.
7	Up to \$20-57 million per million calvings could be saved through control of BVDV and dramatic savings in annual costs due to early diagnosis and control of Johne's disease and <i>Clostridium</i>

Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
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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

Competing Programmatic Challenges

Brief Explanation

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

1. Evaluation Studies Planned

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}