

Animal and Human Health and Well Being through Nutrition

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Animal and Human Health and Well Being through Nutrition

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
308	Improved Animal Products (Before Harvest)	30%		30%	
311	Animal Diseases	20%		20%	
315	Animal Welfare/Well-Being and Protection	50%		50%	
	Total	100%		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	1.0	0.0
Actual	0.1	0.0	0.6	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	9078	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	139672	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	129160	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The poultry subprogram conducted experiments to investigate the effect of hen age and dietary bioactive lipids on egg quality, yolk content, and hatchability. Maternal hen and chick diets with different bioactive lipids were formulated and several analytical aspects such as egg tocopherol, egg and tissue fatty acids, production of eicosanoids, and the status of antioxidant enzymes in the chicks' tissues were assayed. The lead PI taught and mentored graduate students and demonstrated techniques to three visiting scientists. Research findings were disseminated through publications, symposia and at the Poultry science annual meeting and a seminar was given at the Avian Health Institute.

2. Brief description of the target audience

The target audiences are scientific peers in the United States and World, Extension personnel, nutritional consultants and ultimately dairy, livestock and poultry producers.

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	25	0	0	0
2007	1200	5500	100	400

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	8	8

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

PROVIDE ADDITIONAL UNDERSTANDING FOR PLANT AND ANIMAL PROTECTION FROM DISEASES AND PESTS – carry out experiments to test the effects of a natural product (OmniGen-AF) on the development of J5 titer following vaccination with aPfizer J5 E. coli vaccine.

Year	Target	Actual
2007	0	0

Output #2

Output Measure

DEVELOP IMPROVED ANIMAL AND PLANT PRODUCTION SYSTEMS - reduce percentage of mortality to enhance hatchability in poultry – carry out tests to identify a marker of immunity in livestock

Year	Target	Actual
2007	0	1

Output #3

Output Measure

EFFECTS ON AND PROTECTION OF HUMAN HEALTH - increase percentage of n-3 fatty acids and CLA in poultry foods to enhance availability of these health-enhancing nutrients to consumers and lead to novel product development and increased marketability of poultry products.

Year	Target	Actual
2007	0	1

V(G). State Defined Outcomes

O No.	Outcome Name
1	Improved Animal Health - peers are provided new knowledge about the fundamental relationship between maternal diet, fatty acid metabolism and egg hatchability. - producers learn of a technological strategy to enhance the efficacy of their vaccination programs in livestock (available by 2008 or 2009) and of a diagnostic method which will assess immune health of their livestock (available in 2009n or 2010).
2	Improved productivity - poultry industry changes feed formulations to reduce embryonic mortality during incubation (thereby enhancing hatchability) and to improve animal health and to produce health-enhancing nutrients (thus developing value-added poultry foods). - Livestock producers use diagnostic methods and new vaccination programs to increase immunity (innate and acquired) in domestic animals
3	Hatchability and value-added poultry foods will bring increased economic returns to the US poultry industry. Better human and animal health, well-being, and survivability result with the use of nutrition and nutrigenomics and organic production.

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

Public Policy changes

Government Regulations

Competing Public priorities

Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

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

1. Evaluation Studies Planned

Retrospective (post program)

Other (peer review process)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}