

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Food Safety - Agricultural Biosecurity

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
211	Insects, Mites, and Other Arthropods Affecting Plants	13%		5%	
212	Pathogens and Nematodes Affecting Plants	12%		50%	
213	Weeds Affecting Plants	13%		0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	10%		35%	
903	Communication, Education, and Information Delivery	52%		10%	
	Total	100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	0.7	0.0	2.0	0.0
Actual Paid Professional	0.5	0.0	3.0	0.0
Actual Volunteer	0.0	0.0	0.0	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
15000	0	130728	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
15000	0	130728	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
25000	0	743623	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Maintain and expand, as appropriate, the OSU **National Institute for Microbial Forensics & Food and Agricultural Biosecurity**, a multi-disciplinary unit to support and address issues of crop and food safety and biosecurity, and their impacts.
- Conduct **scientific research** targeted specifically towards plant pathogen forensics, produce safety, sociological impacts of terrorism and other areas of agricultural biosecurity
- *Continue to offer targeted coursework** for students seeking M.S. or Ph.D. degrees in established programs such as Plant Pathology, Biochemistry, Plant Sciences or Forensic Sciences, who seek plant pathogen forensics. Consider establishing an **academic "track"** leading to a certificate or Minor in this area.
- Participate on/in local and national grant panels, advisory boards, review committees, expert bodies and other activities, as appropriate, to maintain visibility of OSU and NIMFFAB in the national biosecurity, homeland security, microbial forensics, and food safety communities.

2. Brief description of the target audience

- Key members of National and Oklahoma homeland security community (DHS, FBI, CIA, etc)
- Key members of National and Oklahoma agricultural leaders and representatives
- Oklahoma extension personnel
- Master gardeners
- Oklahoma producers and crop consultants
- OSU students and faculty
- Professional/scientific societies
- Key industries
- The public

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	1	6	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of OSU faculty, students and staff affiliated with, or collaborating with NIMFFAB.

Year	Actual
2013	27

Output #2

Output Measure

- Number of outside-OSU researchers, agencies and entities sponsoring, collaborating with or benefiting from NIMFFAB activities.

Year	Actual
2013	45

Output #3

Output Measure

- Number of grant/contract proposals submitted in agricultural microbial forensics and biosecurity, and food safety.

Year	Actual
2013	20

Output #4

Output Measure

- Number of grants/contracts awarded in those areas.

Year	Actual
2013	8

Output #5

Output Measure

- Number of journal articles submitted with emphasis on agricultural microbial forensics and biosecurity.

Year	Actual
2013	19

Output #6

Output Measure

- Number of students taking classes or seminars developed as part of the OSU Agricultural Biosecurity initiative.

Year	Actual
2013	74

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of invitations to agricultural biosecurity team members for participation in initiatives, programs, presentations, and consultations related to agricultural biosecurity and microbial forensics
2	Number of team-associated individuals who a. Performed a project related internship b. Were hired into a professional position in the biosecurity or food safety field c. Served on agricultural biosecurity or food safety review committees or panels
3	Graduate students who will populate laboratories whose testing is related to the protection of human, animal, and plant health from infection by pathogenic organisms.
4	Number of students enrolled in courses that contain a significant portion of material on agro-terrorism, bio-terrorism, or food safety.

Outcome #1

1. Outcome Measures

Number of invitations to agricultural biosecurity team members for participation in initiatives, programs, presentations, and consultations related to agricultural biosecurity and microbial forensics

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	28

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
903	Communication, Education, and Information Delivery

Outcome #2

1. Outcome Measures

Number of team-associated individuals who a. Performed a project related internship b. Were hired into a professional position in the biosecurity or food safety field c. Served on agricultural biosecurity or food safety review committees or panels

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
212	Pathogens and Nematodes Affecting Plants
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
903	Communication, Education, and Information Delivery

Outcome #3

1. Outcome Measures

Graduate students who will populate laboratories whose testing is related to the protection of human, animal, and plant health from infection by pathogenic organisms.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	6

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
903	Communication, Education, and Information Delivery

Outcome #4

1. Outcome Measures

Number of students enrolled in courses that contain a significant portion of material on agro-terrorism, bio-terrorism, or food safety.

2. Associated Institution Types

- 1862 Research

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	26

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
----------------	-----------------------

211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

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
- Other (exotic pathogens, terrorism)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}