

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Climate Change

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
102	Soil, Plant, Water, Nutrient Relationships	25%			
123	Management and Sustainability of Forest Resources	30%			
124	Urban Forestry	10%			
125	Agroforestry	20%			
605	Natural Resource and Environmental Economics	15%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2014	Extension		Research	
	1862	1890	1862	1890
Plan	11.0	0.0	0.0	0.0
Actual Paid	3.0	0.0	0.0	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
205000	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
17506	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

In 2014, the Climate Change planned program at West Virginia University Extension worked towards developing an agriculture system that maintains high productivity in the face of climate changes. It helps producers plan for and make decisions to adapt to changing environments and sustain economic vitality and take advantage of emerging economic opportunities offered by climate change mitigation technologies.

Objectives addressed in this program area include:

- Decrease risk and loss to farming operations through use of risk mitigation tools and control of predation
- Improve woodlot conditions and expand forest and non-timber product production
- Improve the business and management competencies of forest/wood industry businesses.
- Increase compliance with and knowledge of the WV Best Management Practices for controlling soil erosion and sedimentation from logging operations.
- Increase the capacity of local communities and landowners in nutrient management and sustainability

Activities in this program area fall under several categories related to the protection of natural resources including: composting and utilization, nutrient management, forestry, logging and milling, hay production, and grassland management. Topics include: agricultural and cover crop, calibration methods & demonstration, WV GreenUp logging, forage economics, forage sampling and testing, nutrient management, grassland management, risk mitigation.

This year, there were 92 educational activities and 8,734 direct contacts reported in the climate change program area.

2. Brief description of the target audience

Target audiences include private forestland owners, forestry professionals, researchers, general public.

3. How was eXtension used?

One specialist wrote a "waste to worth" abstract which is posted on eXtension.

One specialist answered 5 "ask and expert" questions via extension.org.

V(E). Planned Program (Outputs)

1. Standard output measures

2014	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4734	4000	3623	0

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

Patent Applications Submitted

Year: 2014

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2014	Extension	Research	Total
Actual	18	7	25

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of educational climate control educational activities

Year	Actual
2014	92

Output #2

Output Measure

- Number of educational materials about climate control created or updated

Year	Actual
2014	2

Output #3

Output Measure

- Number of professional presentations about climate control

Year	Actual
2014	88

Output #4

Output Measure

- Number of educational materials about climate control distributed

Year	Actual
2014	4000

Output #5

Output Measure

- Number of current year climate control relevant research programs
Not reporting on this Output for this Annual Report

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of participants who increase their knowledge of management practices under climate variability and change
2	The number that adopted recommended adaptation strategies for production agriculture and natural resources management, including invasive species, pest management, pollutant loads, wetlands.
3	Number of participants who adopt recommended climate mitigation practices.
4	Number of groups or organizations that change their procedures and/or policies regarding climate control
5	Number of economic improvements
6	Number of environmental improvements
7	Number of participants who gained knowledge and skill about the economic and ecological value of wildlife.
8	Number who increased their knowledge of adaptive strategies for production agriculture and natural resource management.

Outcome #1

1. Outcome Measures

Number of participants who increase their knowledge of management practices under climate variability and change

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	225

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The purpose of Renewable Resources Extension Act (RREA)-supported programs in West Virginia is to put landowners in touch with natural resources professionals and to educate citizens about forests, wildlife, and water resources. Education programs developed for the 270,000 private landowners aim to demonstrate the importance of natural resources and how these resources can be managed to assure they are available for current and future use. Stakeholders include Master Gardeners, Master Naturalists, WV Woodland Stewards, and Woodland Owners Association members, and programs are carried out with funds from educational grants (e.g., USDA Redesign, WV Forest Stewardship Program).

What has been done

The first West Virginia Women Working in their Woods event was carried out in 2014. Twenty-five women woodland owners participated in the event held at Jackson's Mill State 4H Camp. Woodland owners networks, groups of individuals participated in "Walks in the Woods" and other natural resources seminars. In 2014, over 200 woodland owners, nature enthusiasts, and interested citizens participated in these educational opportunities.

Results

225 participants in woodland educational activities gained knowledge and skill about the importance of natural resources and how these resources can be managed to assure they are available for current and future use.

4. Associated Knowledge Areas

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

123 Management and Sustainability of Forest Resources

Outcome #2

1. Outcome Measures

The number that adopted recommended adaptation strategies for production agriculture and natural resources management, including invasive species, pest management, pollutant loads, wetlands.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Number of participants who adopt recommended climate mitigation practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
605	Natural Resource and Environmental Economics

Outcome #4

1. Outcome Measures

Number of groups or organizations that change their procedures and/or policies regarding climate control

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
605	Natural Resource and Environmental Economics

Outcome #5

1. Outcome Measures

Number of economic improvements

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
605	Natural Resource and Environmental Economics

Outcome #6

1. Outcome Measures

Number of environmental improvements

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

{No Data Entered}

What has been done

{No Data Entered}

Results

{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
123	Management and Sustainability of Forest Resources
124	Urban Forestry
125	Agroforestry
605	Natural Resource and Environmental Economics

Outcome #7

1. Outcome Measures

Number of participants who gained knowledge and skill about the economic and ecological value of wildlife.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	225

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Bats provide economic and ecological value to West Virginia. Bats eat bugs, and if bats had to be replaced with pesticides it would pose potential health and pollution threats because of greater levels of toxins in the environment. Landowners, would also have to expend greater funds on pesticides which would reduce their income.

What has been done

Our wildlife specialist has developed a workshop/presentation entitled "Bats of West Virginia and Beyond," that he has presented to seven audiences for a total of 342 participants ranging in age from elementary school students to professional foresters, legislators and other adult learners.

Results

342 participants gained a better understanding of the natural history of bats in West Virginia, the ecological services they provide, and how to better manage their habitats.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #8

1. Outcome Measures

Number who increased their knowledge of adaptive strategies for production agriculture and natural resource management.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2014	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Extension is charged with increasing the capacity of local communities and landowners to manage and sustain nutrients in the soil.

What has been done

In 2014, a number of educational activities were offered to land owners interested in managing and sustaining the nutrients in their soil. These initiatives include: reviewing winter feeding BMPs with livestock farmers, making presentations on the effectiveness of poultry litter for forage production, developing and promoting new site specific tools (GPS & GIS) to manage nutrients, making presentations to home gardeners on the fundamentals of soil management, adding vegetable crops to a new Extension soil fertility spread sheet tools and corresponding fact sheets, and speaking to golf course managers about new WV specific nutrient management tools available for their use.

Results

437 participants in WVUES programs on soil management and sustainability gained knowledge and skills in winter feeding BMPS with livestock, using poultry litter for forage production, and using nutrient management tools.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

None

Key Items of Evaluation

Faculty use satisfaction surveys only in this program area.