Plants and Their Systems

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Plants and Their Systems

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	14%		14%	
202	Plant Genetic Resources	17%		17%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plant	21%		21%	
204	Plant Product Quality and Utility (Preharvest)	3%		3%	
205	Plant Management Systems	17%		17%	
211	Insects, Mites, and Other Arthropods Affecting Plants	6%		6%	
212	Pathogens and Nematodes Affecting Plants	10%		10%	
213	Weeds Affecting Plants	6%		6%	
215	Biological Control of Pests Affecting Plants	3%		3%	
216	Integrated Pest Management Systems	3%		3%	
	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	29.8	0.0	50.0	0.0
Actual	23.5	0.0	22.0	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
526334	0	449422	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
526334	0	449422	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

Plant breeders, entomologists, and plant pathologists will develop superior varieties with tolerance or resistance to insects and new disease races. Agronomists will evaluate crop management systems and forage systems that are best adapted to South Dakota, including areas with a history of limited growing season moisture. Soil scientists will develop more effective and cost efficient strategies for conserving soils and reducing fertilizer inputs in cropping systems. Entomologists, plant pathologists, and weed scientists will develop more effective and cost efficient means to safely control plant pests while reducing chemical inputs; including IPM and alternative methods. Extension will deliver the resulting research and extension program impacts to the SD Department of Agriculture, SD Crop Improvement Association, SD Corn Utilization Council, SD Soybean Research & Promotion Council, SD Wheat Commission, SD Oilseeds Council, SD Association of County Weed & Pest Boards, SD Weed Commission, and Master Gardeners Association.

2. Brief description of the target audience

All farm producers, agricultural land owners, hobby gardeners, homeowners, and Master Gardeners

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	21346	18600	380	360
2007	16390	16000	95	200

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	32	14	46

V(F). State Defined Outputs

Output Target
Output #1

Output Measure

Number of research projects completed in SDSU Planned Program Two - Plants and Their Systems

Year	Target	Actual
2007	10	7

Output #2

Output Measure

Number of Plant Variety Protection (PVP) varieties - Title V registration

Year	Target	Actual
2007	1	3

V(G). State Defined Outcomes

O No.	Outcome Name
1	Number of farmers learning about new crops, varieties, crop management techniques, forages and biofuels.
2	Number of farmers learning new insect control and IPM management techniques
3	Number of farmers learning new plant disease control and IPM management techniques.
4	Number of farmers learning new chemical, biological, alternative weed control and IPM techniques and pesticide safety.

Plants and Their Systems
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

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area

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
Other (changes in plant pests)

Brief Explanation

The biggest external factor facing agronomic plant production and profitability is the skyrocketing price of fuel and fertilizer.While the value of crops has increased dramatically, producers are realizing that input prices have also increased substantially.

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

1. Evaluation Studies Planned

Before-After (before and after program)
Other (Increase in biofuel production)

Evaluation Results

{No Data Entered}

Key Items of Evaluation

{No Data Entered}