Integrated Production Systems

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V(A). Planned Program (Summary)

1. Name of the Planned Program

Integrated Production 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
102	Soil, Plant, Water, Nutrient Relationships			12%	
111	Conservation and Efficient Use of Water			12%	
121	Management of Range Resources			5%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants			12%	
204	Plant Product Quality and Utility (Preharvest)			1%	
205	Plant Management Systems			33%	
216	Integrated Pest Management Systems			25%	
	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	4.0	0.0
Actual	0.0	0.0	1.8	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c 0	1890 Extension 0	Hatch 43899	Evans-Allen 0
1862 Matching 0	1890 Matching 0	1862 Matching 675384	1890 Matching 0
1862 All Other 0	1890 All Other 0	1862 All Other 129546	1890 All Other 0

V(D). Planned Program (Activity)

1. Brief description of the Activity

The ultimate goal of this program is to produce an agricultural system that is highly competitive in the global economy but remains in harmony with the environment. Investigators conducted sustainable management trial for important crops and potential alternate crops for the Treasure Valley including onions, sugar beets, alfalfa, small grains and the alternative crops: soybeans, poplars, and wildflower seeds. Other field trials examined irrigation, fertility, disease management, and cultivar differences on potato (Solanum tuberosum L.) yield, grade, and other quality attributes. Results from this program were disseminated through field days and publications, and presented to different commodity groups.

2. Brief description of the target audience

- growers
- community leaders
- extension educators.
- commercial producers.
- policy makers.

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	100	100	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	4	4

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

PROVIDE ADDITIONAL UNDERSTANDING FOR PLANT AND ANIMAL PROTECTION FROM DISEASES AND PESTS TO GROWERS AND PEERS - herbicides that can be safely and efficaciously used in different crops - knowledge about the biology of yellow nutsedge under local conditions - innovations that mitigates the detrimental effect of Verticillium wilt, probably the most limiting disease of potato in the Treasure Valley.

Year	Target	Actual
2007	10	1

Output #2

Output Measure

DEVELOP BREEDING PROGRAMS THAT RESULT IN DESIRABLE TRAITS, CULTIVARS AND VARIETIES - onion germplasm for year-round marketing. - OSU and ARS breeding program partnership develops at least one varietal selection for potato adaptation to the Treasure Valley. Selections at the Malheur Experiment Station, including colored flesh potato varieties, may have special market opportunities. - alkaline tolerant poplar tree varieties developed for saw log production on poor and sloping soils with the aid of drip irrigation.

Year	Target	Actual
2007	1	1

Output #3

Output Measure

SCHOLARLY excellence through papers and reports, book chapters, presentations, service, on boards/panels and to local clientele, awards and honors

Year	Target	Actual
2007	4	20

Output #4

Output Measure

Develop improved animal and plant production systems for growers: - subsurface drip irrigation or different bed conformation works with potatoes. - automated systems use soil moisture monitoring to override fixed schedule drip irrigation systems when the soil was too wet avoiding leaching water and nitrate to groundwater. - efficient use of soil nitrate and the other available N sources

Year	Target	Actual
2007	10	1

V(G). State Defined Outcomes

O No.	Outcome Name
1	Percentage of Growers become aware of the level of management required to deal with yellow nutsedge well as risks associated with this pest in areas where is just now becoming established.
2	Number of growers understand the factors affecting metham sodium activity against yellow nutsedge.
3	Growers are made aware that environmentally friendly drip and micro sprinkler irrigation systems produce increased crop yield and crop quality and that less nitrogen is required when crops are irrigated than with furrow and regular sprinkler irrigation.
4	The station has proved to growers and public sector that micro irrigation can achieve environmental benefits if made economically feasible through reductions in other costs not related to the added costs of the micro irrigation system and improvements in crop yield or quality.
5	Growers apply metham sodium when environmental conditions are more favorable for effective activity against yellow nutsedge.
6	Growers implement drip irrigation and produce more marketable yields of onions, potatoes, and poplar trees than with furrow or sprinkler irrigation. and achieve efficient use of soil nitrate and the other available N sources under drip irrigation.
7	Through appropriate application of herbicides, producers reduce 50% of the yellow nutsedge tubers they must manage in following crops.
8	Micro irrigation reduces percentage of water use, leaving more water in streams and reservoirs, and reduces surface water contamination of streams and groundwater contamination by nitrate and pesticides

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

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}