

**V(A). Planned Program (Summary)**

**Program # 9**

**1. Name of the Planned Program**

Ag: Livestock Based 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	8%			
112	Watershed Protection and Management	8%			
121	Management of Range Resources	8%			
205	Plant Management Systems	20%			
303	Genetic Improvement of Animals	20%			
307	Animal Management Systems	20%			
308	Improved Animal Products (Before Harvest)	3%			
311	Animal Diseases	4%			
315	Animal Welfare/Well-Being and Protection	4%			
501	New and Improved Food Processing Technologies	5%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	22.3	0.0	0.0	0.0
Actual	28.5	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
383585	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
383585	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1251285	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

A combination of activities (methods listed below) that are designed to meet the needs and opportunities of the communities of interest will be built upon the research base of the university.

**2. Brief description of the target audience**

1.Ranchers, dairy producers and animal product processors  
 2.Agricultural infrastructure, suppliers and service providers  
 3.State and federal agencies managing both regulatory and incentive based programs

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	76000	100000	1000	1000
<b>Actual</b>	78031	114664	954	1735

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 64  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
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<b>Plan</b>	0	0	
<b>Actual</b>	32	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of Education Classes Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	282	293

**Output #2**

**Output Measure**

- Number of Workshops Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	282	284

**Output #3**

**Output Measure**

- Number of Group Discussions Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	141	156

**Output #4**

**Output Measure**

- Number of One-On-One Interventions Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1176	1256

**Output #5**

**Output Measure**

- Number of Demonstrations Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	71	73

**Output #6**

**Output Measure**

- Web Sites Maintained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	3	6

**Output #7**

**Output Measure**

- Newspaper Articles Planned

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	94	98

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Increased market value (Million \$) created by application of new processes and animal products.
2	Economic value of assistance from OSU Extension Service professionals as reported by producers (Million \$).

## **Outcome #1**

### **1. Outcome Measures**

Increased market value (Million \$) created by application of new processes and animal products.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Condition Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	2	4

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Milk is Oregon's official state beverage and its third-largest agricultural commodity, with dairy farmers grossing \$404 million in sales in 2009. The state's dairy industry contributes more than \$1 billion to Oregon's economy each year thanks to its approximately 350 dairy farms and 120,000 dairy cows.

#### **What has been done**

To help dairy farmers maximize their milk production, OSU is studying the factors that influence dairy cows' comfort level, which is measured by how much time they lie down. When a cow lies down, the blood flow to her udder increases, which produces more milk. More time on the ground equals more milk.

Extension faculty assist the dairy farmers with correlations between management practices, like assuring comfort level of the herd, and the amount of milk produced, developing recommendations for keeping dairy cows healthy while optimizing income and the quality of the milk.

#### **Results**

For each additional hour a dairy cow lies down, there's a gain of 3.7 pounds of milk. Those extra pounds mean extra cash for dairies.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
121	Management of Range Resources
205	Plant Management Systems
303	Genetic Improvement of Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
315	Animal Welfare/Well-Being and Protection
501	New and Improved Food Processing Technologies

## **Outcome #2**

### **1. Outcome Measures**

Economic value of assistance from OSU Extension Service professionals as reported by producers (Million \$).

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Condition Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	3	5

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Does production practices of clientele who use OSU Extension program information to properly test soil change? Do clientele follow OSU guidelines for fertilizing pastures? The goal of this evaluation is to determine whether pasture fertilization programs lead to improved fertilizer application practices; thereby saving producers money by decreasing the amount of fertilizer applied, increasing forage production with increased type and amount of fertilizer, improving timing of application, and/or using the information to make environmentally prudent decisions in their fertilization program.

#### **What has been done**

Educational information provided to producers included numerous classes and workshops, consultations with producers, applied research projects, and publishing and sharing of fact sheets on proper soil testing and fertilizing. The information covered topics such as how to take a soil sample, interpreting soil test results, understanding fertilizer materials, using the OSU fertilizer guide, strategic fertilization, grazing impact on fertility, legume components and fertilizing, and much more (T-Sum 200, Se fertilization of pastures, Pasture Calendar, Oregon Beef Library publications, poster presentations, etc.).

### **Results**

Survey responses were returned by 42 western Oregon producers who had worked with OSU on pasture fertilization issues. The majority of them (79%) have taken soil samples to evaluate their soil fertility. Of these, 93% used the soil test results to guide their fertilizer applications. About half plan to take soil samples within 2 to 3 years to recheck their status. A large majority of the producers reported that they followed these practices or changed their practices because of OSU information.

Over half of the producers said they saved money by fertilizing according to OSU recommendations. The savings reported in the survey calculates out to be an estimated \$30.25/acre of pasture. With an estimated 1.8 million acres of pasture in western Oregon, forage producers have the potential to save over 54 million dollars by following OSU pasture fertilizer guidelines.

80% of producers surveyed believe that their fertilizer practices are more environmentally sound by following OSU guidelines. It is a well-documented fact that fertilizing judiciously protects the groundwater from being contaminated by improper fertilization practices.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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## **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
- Populations changes (immigration, new cultural groupings, etc.)

### **Brief Explanation**

{No Data Entered}

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

### **1. Evaluation Studies Planned**

- Before-After (before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants

### **Evaluation Results**

For each additional hour a dairy cow lies down, there's a gain of 3.7 pounds of milk. Those extra pounds mean extra cash for dairies.

Producers in western Oregon are taking soil samples to evaluate their soil fertility and using soil test results to guide their fertilizer applications. The savings from reduced fertilizer use reported by the producers calculates to \$30.25/acre of pasture. Producers also report that their fertilizer practices are more environmentally sound by following OSU guidelines.

### **Key Items of Evaluation**