Project:	**340 Alfalfa Experimental Germplasm and Cultivar Adaptation and Evaluation**
Project Leader:	*Dan Putnam,* Extension Agronomist, Dept. of Plant Science, UC Davis *Harry L. Carlson*, Center Director, UC Intermountain Research & Extension Center, Tulelake *Steve Orloff*, County Director/Farm Advisor, Siskiyou County, Yreka *Don Kirby*, Superintendent, Intermountain Research & Extension Center, Tulelake *Craig Giannini*, UC SRA, UC Davis
Objective:	1) to evaluate certified cultivar differences in alfalfa forage yield, quality, and persistence, and to communicate these results to clientele; 2) to develop and provide forage yield and performance data on alfalfa experimental germplasm to public and private alfalfa scientists.

Project:	**341 Effect of Small Grains Rotation on Alfalfa Stand Establishment and Yield**
Project Leader:	*Steve Orloff*, County Director/Farm Advisor, Siskiyou County, Yreka *Dan Putnam,* Extension Agronomist, Department of Plant Sciences, UC Davis
Objective:	1) Evaluate the effect of a small grain rotation crop on alfalfa stand establishment and yield the first year; 2) Determine whether there are differences between small grain species and varieties in regards to their effect on alfalfa establishment; 3) Evaluate the effectiveness of different production practices at mitigating any negative effect of a small grain rotation crop on alfalfa stand and vigor.

Project:	**344 Evaluation of Roundup Ready and Conventional Alfalfa Production Systems**
Project Leader:	*Steve Orloff*, County Director/Farm Advisor, Siskiyou County, Yreka *Dan Putnam,* Extension Agronomist, Department of Plant Sciences, UC Davis
Objective:	1) Compare the RR production system with conventional alfalfa production (non RR varieties and standard herbicides); 2) Compare the performance of RR alfalfa varieties with conventional varieties; 3) Document the amount of injury that occurs with conventional herbicides compared with Roundup sprayed on the genetically-engineered varieties.

Project:	**347 Maturity Effects on Yield and Quality of Reduced Lignin and Conventional Alfalfa**
Project Leader:	*Steve Orloff*, County Director/Farm Advisor, Siskiyou County, Yreka *Dan Putnam,* Extension Agronomist, Department of Plant Sciences, UC Davis
Objective:	1). Determine the rate of forage quality change of genetically engineered low lignin alfalfa compared to the null that does not carry the trait and compared with a commercial standard. 2). Determine the appropriate cutting management schedule for low lignin alfalfa compared with standard non GE alfalfa.

Project:	**349 Fall Harvest Management Strategies for Alfalfa**
Project Leader:	*Steve Orloff*, County Director/Farm Advisor, Siskiyou County, Yreka *Dan Putnam,* Extension Agronomist, Department of Plant Sciences, UC Davis
Objective:	Fall harvest management is a critical aspect of alfalfa production in the intermountian area. If the alfalfa plants enter the winter with insufficient root reserves, reduced alfalfa vigor or even winter kill may result. In recent years growers have started harvesting later and later into the fall. The effect of this strategy on alfalfa yield and stand life in the Intermountain environment is not well understood and deserves further research.

Project:	**353 Deficit Irrigation Strategies to Maximize Alfalfa Returns with Limited Water Supplies**
Project Leader:	*Steve Orloff*, County Director/Farm Advisor, Siskiyou County, Yreka *Harry L. Carlson*, Center Director, UC Intermountain Research & Extension Center, Tulelake *Blain Hanson*, Irrigation Specialist, LAWR, UC Davis *Dan Putnam,* Extension Agronomist, Department of Plant Sciences, UC Davis
Objective:	1) determine the effect of different irrigation strategies on soil moisture levels; 2) correlate infrared thermometer readings with soil moisture levels recorded with a neutron probe and Watermark® resistance block sensors; 3) quantify the effects of deficit irrigation on the yield and quality of alfalfa compared with full irrigation; 4) determine the effect of various deficit irrigation treatments on alfalfa stand survival; 5) identify the least detrimental and most profitable irrigation management strategy for alfalfa produced with insufficient water supplies.

Project:	**397 Alfalfa Germplasm Evaluation - Fall Dormancy**
Project Leader:	*Larry Teuber*, Professor, Department of Plant Sciences, UC Davis *Carla E. Rivera*, SRA, Department of Plant Sciences UC Davis *Steve Orloff*, County Director/Farm Advisor, Siskiyou County, Yreka
Objective:	1) to determine fall dormancy reaction of cultivars and experimental cultivars that have potential for marketing in California; 2) to determine stability of fall dormancy reactions of check cultivars across years and locations; 3) to assess the interregional stability of cultivars and a recently adopted set of standard check cultivars; 4) to evaluate winter injury and follow the relationship between winter injury and fall dormancy.