

NATIONAL ALFALFA & FORAGE ALLIANCE



NAFA[®]









**Alfalfa:
Not the Little Rascal You Remember**



**National Alfalfa &
Forage Alliance
5th Annual D.C. Fly-In**

Tuesday, February 24 - Thursday, February 26, 2015

Alfalfa is key to sustainable agricultural systems and is an economic engine in rural communities - its value for soil conservation, nitrogen fixation, energy savings, crop rotation, and wildlife habitat is unsurpassed.

Alfalfa must offer a competitive value for farmers in order to provide these benefits and maintain or expand its acreage base. Being recognized in policy and research funding decisions is critical in keeping pace with other cropping choices.



Value of Alfalfa Production

\$12.6 billion in 2014

National Ranking
State Ranking Among All Field Crops



National Alfalfa & Forage Alliance

4630 Churchill Street, #1
St. Paul, MN 55126
651.484.3888
nafa@alfalfa.org

Source: USDA-NASS 2014

(Includes dry hay & haylage for CA, ID, IL, IA, KS, MI, MN, MO, NE, NM, NY, OH, PA, SD, TX, VT, WA, and WI.)

NAFA Priorities

NAFA requests agencies use sound science in policy development and adhere to established comment procedures.

- **Alfalfa Safety Net**

- Forage Crop Insurance (enhance existing APH program; work with developers to craft new revenue and/or quality policies)

- **Public Research**

- ARS

- Request continued support for U.S. Dairy Forage Research Center
 - Establish two western positions to work in collaboration with the USDFRC
- Request continued support for St. Paul ARS Forage Unit (i.e., fill vacant positions)
- Request continued support for Logan ARS Units (Bee Lab & Forage Unit)(i.e., fill vacant positions)
- Maintain support for Prosser position

- NIFA

- Request continued funding for Alfalfa Seed and Forage Systems Research Program
- Work with NIFA on land grant commitment to forages (i.e., fill vacant forage positions)
- Continue to work with NIFA on grant opportunities (e.g., BRAG)

- **Emergency Forage Strategy**

- **NASS Data**

- Secure value reporting for alfalfa green chop/haylage
- Improve accuracy of alfalfa yield reporting (i.e., survey questions)

- **Maintain and Enhance Key Export Markets**

- When appropriate, work with ASTA, agencies, and other national associations to establish LLP tolerances
- Refine coexistence strategies, when appropriate, to meet requirements of key export markets

- **Crop Protection Tools**

- Continue to work with EPA to support and maintain seed industry crop protection tools (*seed industry has non-food use status*)
- Continue to work with EPA to support and maintain forage crop protection tools

- **Miscellaneous**

- Monitor the Endangered Species Act (ESA)
- Monitor RFS2 certification process





Persistence...
SUCCESS!

NAFA STRATEGIES & POLICY ISSUES

NAFA requests agencies use sound science in policy development and adhere to established comment procedures.

- **Alfalfa Safety Net**

- Forage Crop Insurance (enhance existing program; work with developers as they craft new revenue and quality policies)
- ~~Title 1 status~~

McConnell Includes Alfalfa Crop Insurance Language in Farm Bill's Manager's Report

Senator Mitch McConnell (R-KY) showed his support for alfalfa by inserting language in the Manager's Report of the 2014 Farm Bill. The language inserted appeared as follows:

"The Managers recognize alfalfa to be an important domestic forage crop valued for nitrogen fixation, soil conservation, crop rotation, and as a natural habitat. The Managers view alfalfa as having great potential for the national cash hay market and as an affordable means of supporting the forage and intensive grazing needs of the horse, cattle, and dairy sectors. However, from 2002 through 2011, alfalfa acreage has declined 15.7 percent, and in 2012 alone acreage declined an additional 10 percent. The Managers stress the importance of an alfalfa crop insurance policy to ensure that producers have the risk management protection that they need to produce this important crop. The Managers urge the Secretary to include information regarding regional differences in cultivation in the alfalfa crop insurance study."

- **Forage Seeding Program**
- **Actual Revenue History (ARH)**

Persistence...
SUCCESS!



NAFA STRATEGIES & POLICY ISSUES

- **Maintain and Enhance Key Export Markets**

- When appropriate, work with ASTA, agencies, and other national associations to establish LLP tolerances
- Refine coexistence strategies, when appropriate, to meet requirements of key export markets



The National Alfalfa and Forage Alliance (NAFA) strongly supports the availability and continued use of biotechnology in agriculture. These advances will allow American farmers to effectively compete in the world market and will enable American farmers to supply abundant, safe, high quality food, fiber and renewable fuel desired by global consumers.

NAFA acknowledges and respects different markets and methodologies of food, fiber and renewable fuel production. We believe that science based stewardship management practices allow for the coexistence of these different markets and methodologies in production agriculture.

NAFA believes collaborative efforts among all stakeholders are required to develop methodologies that enable coexistence.

Adopted by NAFA board of directors 4/26/07

A handwritten signature in black ink that reads "Mark Wagoner". The signature is written in a cursive style and is positioned above a horizontal line.

Mark Wagoner, NAFA Chairman



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[Roundup Ready Alfalfa](#)

[NAFA's Statement on](#)

[Roundup Ready](#)

[Grower Opportunity Zones](#)



NAFA Coexistence Documents

- [Coexistence Principles & Glossary of Terms](#) (NAFA, 2015)
- [Grower Opportunity Zones for Seed Production](#) (NAFA, 2015)
- [Procedures for Forming a Grower Opportunity Zone](#) (NAFA, 2015)
- [Best Management Practices for Genetically Enhanced Alfalfa Seed Production](#) (NAFA, 2015)
- [Best Management Practices for APS Alfalfa Seed Production](#) (NAFA, 2015)
- [Coexistence for Alfalfa Hay Export Markets](#) (NAFA, 2014)
- [Coexistence for Alfalfa Seed Export Markets](#) (NAFA, 2014)
- [Coexistence for Organic Alfalfa Seed and Hay Markets](#) (NAFA, 2014)
- [Gene Flow in Alfalfa: Biology, Mitigation, & Potential Impact on Production](#) (CAST, 2008)
[Electronic Version](#)
[Hardcopy Version](#)

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GROWER OPPORTUNITY ZONES & NON-GE SEED PRODUCTION AREAS

AP-SENSITIVE GOZ. This is a zone for seed production of APS alfalfa seed and conventional alfalfa seed. As outlined in NAFA *Best Management Practices for Genetically Enhanced Alfalfa Seed Production*, GEA seed production would not be allowed in an APS GOZ.

The following APS GOZs have been grower requested/approved - click to link to the GOZ map identifying GOZ boundaries for each:

[Parts of Canyon & Owyhee Counties, ID and Malheur County, OR](#) (January, 2012)

[Part of Park County, WY](#) (January, 2012)

[Phillips and Blaine Counties, MT](#) (April, 2015)

[Stillwater and parts of Yellowstone Counties, MT](#) (August, 2015)

[Parts of Big Horn County, WY](#) (August, 2015)

[Broadwater County, MT](#) (August, 2015)

GE GOZ. This is a zone for seed production of GE and conventional alfalfa seed that is destined for markets that are not APS. APS alfalfa seed production would not be practical in a GE GOZ. As outlined in *NAFA Best Management Practices for Genetically Enhanced Alfalfa Seed Production*, Association of Official Seed Certifying Agencies (AOSCA) certified seed production isolation requirements apply between GE and conventional seed within a GE GOZ. *NAFA Best Management Practices for Genetically Enhanced Alfalfa Seed Production* isolation requirements apply between a GE seed production field in a GE GOZ and the nearest conventional seed production field outside the GOZ border.

The following GE GOZs have been grower requested/approved - click to link to the GOZ map identifying GOZ boundaries for each:

[Part of Canyon County, ID \(July, 2011\)](#)

[Parts of Walla Walla County, WA & Umatilla County, OR \(July, 2011\)](#)

[Orovada Valley, NV \(August, 2011\)](#)

[Lovelock Valley, NV \(August, 2011\)](#)

[Box Elder and Cache Counties, UT \(August, 2011\)](#)

[Jerome and Minidoka Counties & part of Twin Falls County, ID \(August, 2011\)](#)

[Oneida and Franklin Counties, ID \(August, 2011\)](#)

[Big Horn County, MT \(August, 2011\)](#)

[Washakie County, WY \(August, 2011\)](#)

[Parts of Malheur County, OR & Canyon and Payette Counties, ID \(September, 2011; April, 2015\)](#)

[Fremont County, WY \(September, 2011\)](#)

[Heart Mountain Area, WY \(December, 2011\)](#)

[Carbon County, MT & parts of Park and Big Horn Counties, WY \(January, 2012; April, 2015\)](#)

[Mesa County, CO \(September, 2012\)](#)

[Part of Canyon County, ID \(October, 2012\)](#)

[Rosebud and Treasure Counties, MT \(April, 2014\)](#)

[Part of Big Horn County, WY \(March, 2015\)](#)

[Parts of Ada and Owyhee Counties, ID \(April, 2015\)](#)

[Parts of Umatilla and Morrow Counties, OR \(April 2015; August, 2015\)](#)

[Parts of Big Horn and Park Counties, WY \(October 2015\)](#)



一暨(2015)国际苜蓿会议

2015 International Alfalfa Congress



美国优良牧草种植 (Growing Quality U.S. Alfalfa)



商业苜蓿干草种植者根据产量潜能，抗虫性，抗病性和耐寒性来选择适合的种子来建植新苜蓿地。
Commercial alfalfa hay growers typically establish new stands by choosing certified seed based on yield potential, pest resistance, and winterhardness.



苜蓿应该在坚实的苗床上，播种量为0.9-1.5公斤/亩，苜蓿地寿命一般为5年或更长。
Alfalfa is grown in a firm seed bed usually at 12-20 pounds of seed per acre, and stands can last five years or longer.



第一茬应该在初花期收获，随后每28-33天收获一次，直到生长季末期。
Growers mow first cutting of established alfalfa stands at first flower stage, then harvest every 28-33 days as the growing season nears its end.



如图所示，成排的干草被收割，它们将需要被摊开直至完全干燥以保证安全打包。
Windrows are raked and may need to be tedded before they are dry enough to be safely baled.



干草种植者使用大方形打捆机设置打包出口规模。打包机的湿度传感器，可以帮助控制水分含量。
Many commercial hay growers use large square balers that can be set to export sizes. Moisture sensors can help growers harvest at a consistent moisture content.



成捆的干草或者被储存在干草谷仓，或者用防水布严密包裹来确保质量。
Bales are stacked under hay barns or tarps that help maintain quality.



干草出口企业进行紧密捆绑包裹以保证干草质量。
Hay export companies compact bales and often wrap them to maintain quality.



最终，我们得到了优质的紫花苜蓿干草。
Result: High-quality U.S. alfalfa hay for feeding dairy cows and other livestock.

美国牧草联盟 (National Alfalfa & Forage Alliance)

NAFA致力于确保苜蓿和饲料行业在国内以及国际上所有环节的有效竞争和发展。
NAFA's mission is to ensure the ability of all segments of the alfalfa and forage industry to compete effectively and profitably, domestically and abroad.

NAFA的目标是要建立行业共识，确保利益相关，并成为苜蓿和饲料行业的倡导者。
The objective of NAFA is to be a forum for consensus building among the various stakeholders and to be an effective advocate on behalf of the alfalfa and forage industry.

NAFA 钻石会员 (Diamond Members):



Platinum Members:
America's Alfalfa
California Alfalfa Seed Research Board
CROPLAN®
DEKALB®
NEXGROW
Washington Alfalfa Seed Commission
W-L Research



Silver Members:
California Alfalfa & Forage Association
Idaho Hay & Forage Association
JR Simplot
Kansas Forage & Grassland Council
MacDon Industries Ltd.
Midwest Forage Association
Montana Alfalfa Seed Committee
Nebraska Alfalfa Marketing Association
Nevada Alfalfa Seed Commission
Washington State Hay Growers Association
Wyoming Alfalfa Seed Council












Associate Members:
American Seed Trade Association
Anderson Hay & Grain Co.
Calibrate® Technologies
FMC
Harvest Tec
Hayday Farms Inc.
Michigan Forage Council
Monsanto BioAg
Nelson Irrigation Corporation
New Mexico Hay Association
Oregon Hay & Forage Association
San Joaquin Valley Hay Growers
The Samuel Roberts Noble Foundation
Valley Irrigation



PUBLICATIONS

Click image to view pdf format of publications.

	Publication	Price Per Publication	Quantity	Subtotal
<i>Minimum order quantity of the following NAFA publications is 25 (any combination)</i>				
	Alfalfa Variety Ratings Winter Survival Fall Dormancy & Pest Resistance Ratings for Alfalfa Varieties 2016 Edition	\$0.50	<input type="text" value="0"/>	\$ 0.00
	Alfalfa Germination & Growth	\$2.50	<input type="text" value="0"/>	\$ 0.00
	Alfalfa Analyst	\$2.00	<input type="text" value="0"/>	\$ 0.00
	Alfalfa for Profit	\$0.50	<input type="text" value="0"/>	\$ 0.00
	Alfalfa The High-Quality Hay for Horses	\$2.00	<input type="text" value="0"/>	\$ 0.00
	Alfalfa, Wildlife and the Environment The Importance and Benefits of Alfalfa in the 21st Century	\$2.00	<input type="text" value="0"/>	\$ 0.00
	Growing Alfalfa in the South	\$2.00	<input type="text" value="0"/>	\$ 0.00
	Understanding Forage Quality	\$2.00	<input type="text" value="0"/>	\$ 0.00
	Gene Flow in Alfalfa: Biology, Mitigation, and Potential Impact on Production <small>(No minimum order quantity, 25 maximum)</small>	Free - plus \$2.00 additional shipping/handling fee	<input type="text" value="0"/>	\$ 0.00



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2016 "Alfalfa Variety Ratings" Searchable Database

Variety Name:

Marketer:

Fall Dormancy:

Winter Survival:

Bacterial Wilt:

Verticillium Wilt:

Fusarium Wilt:

Anthracnose Race 1:

Phytophthora Root Rot:

Aphanomyces Race 1:

Aphanomyces Race 2:

Spotted Alfalfa Aphid:

Pea Aphid:

Blue Alfalfa Aphid:

Potato Leafhopper:

Stem Nematode:

Southern Root Knot:

Northern Root Knot:

Multi Foliole Expression:

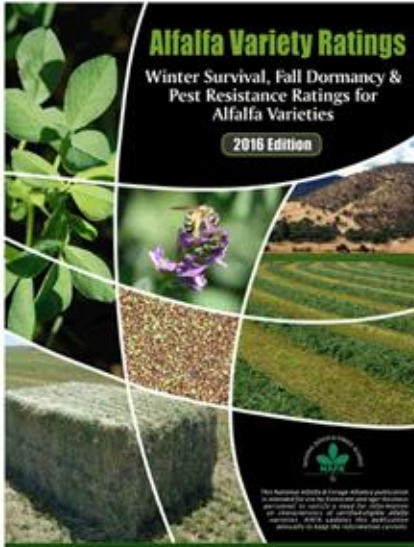
Continuous Grazing Tolerance:

Standability Expression:

Salt Tolerance:

Technology:

Search Reset





Alfalfa Intensive Training Seminar

Fort Wayne, Indiana. November 17-19, 2015

AGENDA

Tuesday, November 17

1:00	Welcome, Seminar Orientation and Overview	Dan Undersander
1:10	History and Importance	Dan Undersander
1:30	Genetics, Variety Testing and Variety Selection	Dan Undersander
2:45	Seed and Seed Production	Marvin Hall
3:15	Break	
3:30	Gene Flow in Alfalfa Seed and Forage Production	Dan Undersander
4:15	Growth and Development	Marvin Hall
5:30	Adjourn	

Wednesday, November 18 morning

8:00	Soils, Fertility and Manure Management	Marvin Hall
9:00	Establishment	Kim Cassida
10:00	Break	
10:15	Irrigation and Water Use	Dan Undersander
10:45	Pest Management	Dan Undersander
12:15	Lunch	

Wednesday, November 18, afternoon

1:00	Quality Terms and Definitions	Neal Martin
1:30	Production Management	Kim Cassida
1:50	Harvesting: Options, Losses, and Decisions	Neal Martin
2:45	Break	
3:00	Mowing and Field Drying	Marvin Hall
3:30	Silage Preservation	Neal Martin
4:10	Hay Preservation	Dan Undersander
5:15	Discussion	
5:30	Adjourn	

Thursday, November 19

8:00	Alfalfa in Rotations	Dan Undersander
8:30	Role of Alfalfa in Dairy Diets	Randy Shaver
9:30	Alfalfa - Custom (Contract) Harvesting	Dan Undersander
10:15	Break	
10:30	Economics	Marvin Hall
11:15	Alfalfa: Crop of the Future	Neal Martin
11:45	Discussion and Wrap-Up	Dan Undersander
12:00	Adjourn	

Alfalfa Intensive Training Seminar



INCREASE YOUR ALFALFA KNOWLEDGE

With today's technology expanding at a rapid pace, there is much to be learned about alfalfa. The **Alfalfa Intensive Training Seminar**, sponsored by the National Alfalfa and Forage Alliance, gives participants the knowledge they need to make the best of their alfalfa investment.



Register
on-line at
alfalfa.org

Join us November 17-19, 2015 in Fort Wayne, Indiana

Instructors:



Dr. Kim Cassida
Michigan State
University



Dr. Dan Undersander
Extension Agronomist
University of Wisconsin



Randy Shaver
Dairy Nutritionist
University of
Wisconsin



Dr. Neal Martin
Former Director
U.S. Dairy Forage
Research Center,
Consultant



Marvin Hall
Extension Agronomist
Penn State University



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Kennewick, WA 99336
(509) 585-5460 ■ Fax (509) 585-2671
Website: www.alfalfa.org

Public Research

- USDA's research portfolio needs to be better balanced to provide needed research for the nation's 3rd most valuable field crop. The decline in acres can be partially attributed to the lack of public research.
- Much public research funding is devoted to the "big 5" (wheat, cotton, corn, soybeans, and rice). The value of all hay in 2013 was \$23 billion; alfalfa alone was \$13 billion. This compares to wheat at \$14.4, cotton at \$5.2, and rice at \$3 (corn is \$62.7 and soybean is \$41.8).
- 2012 CRIS Report data indicate ARS allocated \$44.6 million (109.9 scientist years) to corn, \$42.6 million (104.2 scientist years) to cotton, \$42.1 million (95 scientist years) to wheat, \$34.5 million (82.9 scientist years) to soybean compared to just \$3.7 million (9.9 scientist years) to alfalfa.
- NIFA's research commitment to alfalfa and forage crops is equally dismal. In fact, at many land grant universities throughout the nation the forage program has either been eliminated or rolled into cropping systems.





Persistence...
SUCCESS!

- **Public Research**

- **ARS**

- Request continued support for U.S. Dairy Forage Research Center; ~~hire new director~~
 - Establish two western positions to work in collaboration with the USDFRC
- Request continued support for St. Paul ARS Forage Unit (i.e., fill vacant positions)
- Request continued support for Logan ARS Units (Bee Lab & Forage Unit) (i.e., fill vacant positions)
 - ~~Work to restore seed grower funding from the Logan Bee Lab~~
- Maintain support for Prosser position

Success! ARS Hires Boggess as New U.S. Dairy Forage Research Center Director

NAFA's highest priority in terms of ARS was the appointment of a new Director for the U.S. Dairy Forage Research Center. NAFA worked with ARS in prioritizing this need. In May Dr. Mark Boggess was selected as the new Director.

Success! USDA-ARS Allocates \$100,000 for Alfalfa Pollinator Health Initiative



Persistence...
SUCCESS!

- **Public Research**

- **NIFA**

- ~~Request reauthorization of~~ Seek funding for Alfalfa and Forage Research Program in Farm Bill;
seek funding
- Work with NIFA on land grant commitment to forages (i.e., fill vacant forage positions)
- Continue to work with NIFA on grant opportunities (similar to BRAG offering)

Success! \$1.35 Million in Research Funding

Thanks to the dedicated efforts of Senator Jerry Moran (R-KS).

The request for proposals for the AFRP was distributed in June and resulted in the collection of 23 proposals requesting more than \$3.7 million in funding.



Research Programs

The National Alfalfa & Forage Alliance was instrumental in securing funding for two research programs supporting the alfalfa industry:

- Alfalfa Pollinator Research Initiative (APRI)
- Alfalfa and Forage Research Program (AFRP)

The APRI, administered through USDA's Agricultural Research Service (ARS), is devoted to ensuring the availability of healthy non-Apis pollinator populations essential for alfalfa seed production. APRI research focuses on pollinator management, production, safety, epidemiology and disease management, and genetics and demographics.

The AFRP, administered through USDA's National Institute for Food and Agriculture (NIFA), supports integrated, collaborative research and technology transfer to improve the efficiency and sustainability of conventional and organic forage production systems. The program is devoted to improving alfalfa forage and seed yield, improving persistence, improving alfalfa forage and seed harvesting and storage systems, improving estimates of alfalfa forage quality, and breeding.

Find information by entering one or more of the drop-down search options:

Keyword	<input type="text"/>
Researcher	Please Select ▾
University/Entity	Please Select ▾
Year	Please Select ▾
Categories	Please Select ▾
Research Program	Please Select ▾

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[Project Objectives](#)

[Program Priorities](#)

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2015 Alfalfa Pollinator Research Initiative (APRI)

- **The Role of Lactobacillus Kunkeel in Alfalfa Leafcutter Bee Nutrition**
- Quinn McFrederick, University of California-Riverside (\$21,332)
- **Effects of Pest Management Practices on Pests and Alfalfa Leafcutting Bees in Alfalfa Seed**
- Jim Barbour, Idaho State University (\$15,406)
- **Enhancing and Protecting Populations of Alfalfa Seed Pollinators**
- Doug Walsh, Washington State University (\$15,406)
- **Understanding the Effects of Nutrition and Juvenile Hormone on Reproductive Output in Alkali Bees (*Nomia melanderi*)**
- Karen Kapheim, Utah State University (\$13,815)
- **Interactions Among Alternative Forms of Developmental Mortality in Alfalfa Leafcutting Bees**
- Kevin O'Neill, Montana State University (\$8,000)
- **Lethal and Sublethal Effects of a Systemic Pesticide on Alfalfa Leafcutter Bees**
- Tai Roulston, University of Virginia (\$20,594)
- **Validation and Development of Traps for Pests of Megachile rotundata**
- Theresa Pitts-Singer, USDA-ARS (\$5,843)

2014 Alfalfa Pollinator Research Initiative (APRI)

- **Effects of Pest Management Practices on Pests and Alfalfa Leafcutting Bees in Alfalfa Seed**
- Jim Barbour, University of Idaho (\$15,406)
- **Understanding the Effects of Nutrition and Juvenile Hormone on Reproductive Output in Alkali Bees**
- Karen Kapheim, Utah State University (\$22,454)
- **Probiotic Prospecting for Alfalfa Leafcutting Bees**
- Quinn McFrederick, University of California (\$18,894)
- **Lethal and Sublethal Effects of a Systemic Pesticide on Alfalfa Leafcutter Bees**
- Tai Roulston, University of Virginia (\$23,802)
- **Enhancing and Protecting Populations of the Alkali Bee *Nomia Melanderi***
- Doug Walsh, Washington State University (\$19,444)

Alfalfa and Forage Research Program 2015 (AFRP)

- **Re-Establishing IPM Recommendations for Aphids in Alfalfa Hay in the Low Desert**
- Ayman Mostafa, University of Arizona (\$206,000)
- **Developing Molecular Markers for Enhancing Resistance to Drought and High Salinity in Alfalfa**
- Long Xi Yu, USDA-ARS (\$215,000)
- **Potato Leafhopper Threshold Revised for Alfalfa Host Resistance and Alfalfa Grass Mixtures**
- William Lamp, University of Maryland (\$215,000)
- **Impact of Microbial Inoculants on the Quality and Fermentation Stability of Alfalfa Round-Bale Baleage**
- Rocky Lemus, Mississippi State University (\$213,333)
- **Management Tools to Improve Forage Quality and Persistence of Alfalfa**
- Debbie Cherney, Cornell University (\$203,213)
- **Subsurface Drip Irrigation, Deficit Irrigation Strategies, and Improved Varieties to Improve Alfalfa Water Use Efficiency Under Drought Conditions**
- Dan Putnam, University of California - Davis (\$195,000)

Alfalfa and Forage Research Program 2014 (AFRP)

- **The Effect of Hay Rake Type on Ash Content of Alfalfa Hay**
- Dan Undersander, University of Wisconsin (\$155,884)
- **Developing an Alfalfa Hay Export Market in the Humid Eastern United States**
- Chris Teutsch, Virginia Tech (\$156,140)
- **Root Traits to Enhance Nutrient and Water Use in Alfalfa**
- Deborah Samac, USDA-ARS (\$156,230)
- **Subsurface Drip Irrigation, Deficit Irrigation Strategies, and Improved Varieties to Improve Alfalfa Water Use Efficiency Under Drought Conditions**
- Dan Putnam, University of California-Davis (\$156,254)
- **Using a New In Vitro Method and Fiber Model (TTNDFD) to Improve Estimates of Digestibility of Alfalfa for Dairy Cattle**
- Dave Combs, University of Wisconsin (\$156,280)
- **Nutritive Value and Forage Accumulation of Alfalfa and Alfalfa-Mixtures as Influenced by Forage Management**
- Renata La Guardia Nave, University of Tennessee (\$156,287)
- **Yield Improvement and Fall Dormancy Characterization in Alfalfa**
- Charlie Brummer, University of California-Davis (\$156,287)
- **Implementing Lygus Management Strategies in Alfalfa Seed Production**
- Doug Walsh, Washington State University (\$156,675)



By collaborating together



We can achieve more!