



RUNNOFF

CALIFORNIA-NEVADA CHAPTER NEWSLETTER

SPRING 2007

PRESIDENT'S MESSAGE

by David Rose

Greetings to all in the California and Nevada SWCS family. This is my first message as President of our newly merged chapter. We have now found ourselves at an exciting stage in the history of our chapter and society. I have some priorities to concentrate on during my year as President.



First, with the merger of the former California and Nevada chapters, we have embarked on an exciting new partnership. The natural resource issues we can address together are ever expanding. I'd like to warmly welcome the members from Nevada. Most of our members may be from California, but membership recruiting opportunities in Nevada could easily be greater than we may know.

Second, it appears that the 2007 Farm Bill will be completed soon. Just what changes it will bring will have to wait for a later discussion time, but rest assured, there are monumental changes for federally funded conservation. The conservation of natural resources continues to command an increasingly powerful amount of attention in the process. This Farm Bill may prove to be as historic as the original 1935 legislation that began the federal commitment for conservation. Stay tuned.

Third, training and information exchange needs to continue expanding. People join organizations when they believe that they are getting a positive answer to

the "What's in it for me?" question. Future conferences or seminars should be planned with a broad appeal. Diversity in our membership is a strength and we should embrace unique training opportunities as they are presented to us.

Fourth, recruiting, recruiting, recruiting. We talk a lot about the decline in membership, but are we doing anything to stem the tide? Take a moment to remember why you joined the society in the first place. The positive aspects that sparked you to join and remain a member are likely similar to many others. Don't be afraid to share, you might just be able to motivate someone to join us. Don't forget that we have shirts and vests available to proudly show your association with the society (see page 7).

Fifth, as the year moves along there will be issues that our chapter can address in various ways. We can produce position papers on a particular issue. We can speak directly with decision-makers on the federal, state, and local levels. Conservation program funding levels are dynamic, changing from year to year. However, the reality is that natural resource problems and opportunities tend to be consistent for the state of California. There is always a danger that public opinion can be pulled in many directions with the "issue of the day" mentality that can dominate the media. The Executive Board of the California-Nevada Chapter SWCS is always willing to hear from members regarding issues, programs, funding levels, policy, etc. We need to hear from you so that we can direct our chapter's energies toward the most important concerns.

Finally, I look forward to my year as President. This is a great organization. My goal is to make it as interactive and positive as a professional organization can be. Keep up the good work folks, and I hope to visit with many of you throughout the year.

**SHOW YOUR SWCS PRIDE!
SEE PG. 7 FOR LOGO-WEAR**

SWCS CONFERENCE FUELS DISCUSSION OF SUSTAINABLE ENERGY SOURCES

by Jeff Raifsnider

The California and Nevada Chapters of the SWCS, the CARCD and the IECA featured the developing role of biofuels as renewable sources of energy at their conference held in Sacramento on May 2-4 in Sacramento. A conservation tour of local projects preceded a day and a half of presentations and discussions

led by members of CDFA, NRCS, Sustainable Conservation, UCCE, the California Invasive Plant Council, California Waterfowl Association and private industry.

Biofuel topics included: a sustainable model for biofuel production in California; the viability of technologies for future ethanol production in California; risk assessment of biofuel crops as

invasive species; and coordination of biofuel production with conservation efforts. Other conservation topics included: plant materials; air quality; wetland restoration in the Central Valley; a historical perspective on integrated pest management; manure management and CNMP development. Also offered were CPESC and CPSWQ exams.

A MODEL FOR SUSTAINABLE BIOFUEL PRODUCTION THROUGH DECENTRALIZATION

by Jeff Raifsnider

President of Biodiesel Industries Inc. Russell Teall discussed a sustainable biodiesel model from India that uses inedible oils to avoid negative impact on farmland. He discussed his company's work in developing biodiesel feedstock projects in India, Mexico and the US. Teall also discussed his company's development of prefabricated biodiesel production units

Teall said, "We build, own and operate biodiesel plants. Our company has built plants in Bakersfield CA, Detroit, Colorado, Nevada, Texas and Australia. In Europe the major feedstock for biodiesel is rape seed and in the US it is soybeans. We looked at (that) and thought there must be a better way (than using food crops)." His company is working on feedstock development projects in India, Mexico and the US. On their feedstock development projects, Biodiesel Industries works with high oil content plant strains that are suitable for local conditions.

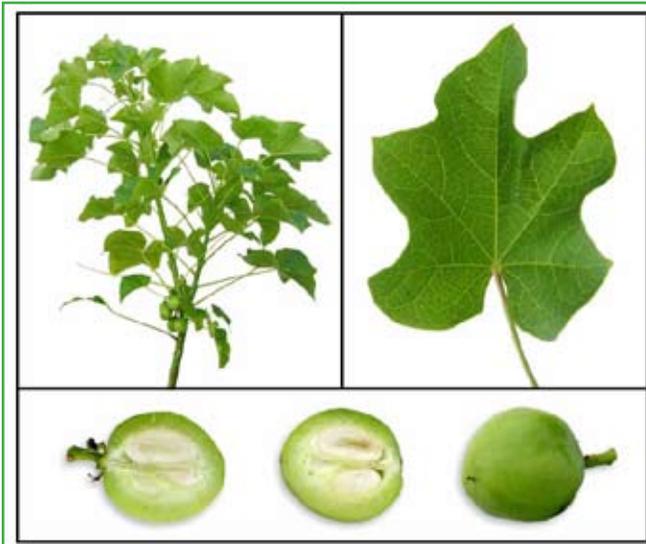
Teall described *Jatropha curcas* as "a bushy, tree-like shrub that

animals and insects don't eat. The nuts make good lamp oil. *Jatropha* is drought resistant and some strains have 40- to 50-percent oil." Along with *Jatropha*, the company plants fungal strains that facilitate soil nutrient transport through mycelium to the feedstock plants. *Jatropha* also provides soil erosion protection and has been described as more effective than tree-planting in protecting soils on plantations in Haiti.

According to Teall his company's prefabricated biodiesel units, known as "Modular Production Units (MPU's)" have the capacity to produce 10-million gallons a year. Teall said, "If an MPU was located at the center of a *Jatropha* plantation, it would take a 5-mile radius to support the MPU at full capacity in two-years. In India, one MPU and the adjacent collection areas would employ 20,000 families. Biodiesel

reduces carbon dioxide emissions by as much as 78-percent when compared with petroleum."

According to Teall, biodiesel offers much as a sustainable and renewable energy source. For every unit of energy used in production of biodiesel, it yields about 3.2 units of energy, plus biodiesel has multiple feedstock capability. It can be produced from soybean oil, canola and multiple other oil sources. Teall said, "Biodiesel's multi-feedstock capability ensures adaptability with changing market conditions and global agricultural niches."



Whole plant, leaf, and fruit of *Jatropha curcas*. Photo from www.stuartxchange.org.

SWCS CONFERENCE TOUR HIGHLIGHTS SUSTAINABLE ENERGY AND CREATIVE CONSERVATION

Woodland Biomass Power Ltd: *This alternative energy power plant produces 25 MW of electricity using agricultural byproducts, urban green waste, and other waste wood as feed stocks. This reduces open burning of agricultural wastes, diverts waste wood from landfills, and reduces the production of greenhouse gases.*

Left: *Conveyors load fuel from the storage yard into the combustion plant. Below: Walnut shells are a component of the feedstock.*

Jeff Raifsnider



Phil Hogan



Phil Hogan

Chamberlain Farms: *The Vegetated Ditches project evaluates whether vegetation in ordinarily-bare farm drainage ditches can reduce pesticide concentrations in runoff. Last year, a simulated run-off event was analyzed to create a model of pesticide fates in vegetated and bare ditches. This year, actual irrigation runoff events will be analyzed at several sites, including this 140-acre alfalfa field. Far right: Duane Chamberlain addresses the tour group. Right: Paul Robins explains the planting scheme.*

Butler "Farm Edges": *This landowners' vision of wildlife habitat merges with the practical needs of the farm operators in a project that layers several practices into a system that benefits water quality, drainage, and wildlife habitat. Field borders and hedgerows blend into a grassed waterway that collects water flowing off the fields through sediment basins and multipurpose ponds, filtering the water before it enters Cottonwood Slough.*

Right: *Mark Steffek inspects a volunteer sunflower at the pond site. Below: Clear water enters the slough after leaving the sediment basin.*

Jeff Raifsnider



Yolo Land and Cattle: *These long-time cooperators have implemented many conservation measures on their sprawling ranch in the Coast Range foothills, including stock water ponds, watering facilities, grazing use exclusion in riparian zones, cross-fencing, and prescribed burns for rangeland weed control. They also run an agritourism enterprise and barbecue a mean tri-tip. Far right: a solar powered pump fills a stock water tank from the fenced-off pond. Right: Low water levels this year forced cattle off the range early in the spring.*



Phil Hogan



Jeff Raifsnider

Ha Truong



Far right: *a solar powered pump fills a stock water tank from the fenced-off pond. Right: Low water levels this year forced cattle off the range early in the spring.*



Phil Hogan

CHAPTER SCHOLARSHIP WINNER SELECTED*by Tina Vander Hoek*

On behalf of the California/Nevada Chapter Scholarship Committee, I am pleased to announce that Carlos Velasquez from South Gate has been selected as this year's \$1,000 scholarship recipient. Carlos is a University of California-Los Angeles student with a double major in History and Geography and Environmental Studies. Carlos received his scholarship on May 4 at our Annual Conference in Sacramento.

This year's choice was based on merits of grades,



Carlos Velasquez (l) accepts the California- Nevada Chapter SWCS Scholarship from Chapter President David Rose (r) at the Chapter Conference in Sacramento, May 4, 2007.

activities showing leadership and interest in resource conservation, and financial need, in that order. Again, It was very hard to make a choice among the applicants, but Carlos stood out.

We will have another scholarship application announcement this fall and I encourage students to apply for it and register for the California-Nevada Chapter Soil and Water Conservation Society student membership. Remember the student membership registration fee covers two years.

Note: Chapter Executive Council Director Tina Vander Hoek, Soil Conservationist with the USDA Natural Resources Conservation Service at Templeton, chairs the Scholarship Committee. Katie Banister, Kay Joy-Barge, and Richelle Leggett also served on the committee.

LAST CALIFORNIA CHAPTER ANNUAL CONFERENCE HELD IN SACRAMENTO*by Walt Bunter*

Despite a low attendance of 52, the Biofuels and Conservation Conference held on May 2 to 4 at the Holiday Inn-Sacramento NorthEast provided significant technical experiences for the attendees. This was our California Chapter's last annual conference and was co-sponsored by the Nevada Chapter SWCS, the California Association of Resource Conservation Districts, and by the Western Chapter of the International Erosion Control Association.

Attendance by SWCS members totaled 22 including one member from Nevada. There were 19 attendees affiliated with the International Erosion Control Association, and two with the California Association of Resource Conservation Districts.

This was the first time that Certified Professional in Erosion and Sediment Control (CPESC) and Certified Professional in Storm Water Quality (CPSWQ) all day training classes were offered. Nine people took the CPESC training on the first day and four took the CPSWQ training on the second day. The CPESC exam was taken by 12 people on the third day.



Adoption of the proposed amendments to the by-laws at the Annual Business Meeting on the second day created the historic merging of the California and Nevada Chapters. Hence forth, our Chapter name is: California-Nevada Chapter SWCS.

HELP PLAN THE CHAPTER'S 2008 SPRING ANNUAL CONFERENCE*by Walt Bunter and Lisa Hokholt*

The 2008 Chapter Spring Conference and Annual Business Meeting will be held next spring at an as-yet undetermined location in central California.

President-Elect Lisa Hokholt from Livermore, Chair of the Annual Conference Committee, is looking for interested members to participate in the Conference Committee that will select the location and date, and plan the program. Committee work will be primarily via email and teleconferences.

Please contact Lisa via email at Lisa.Hokholt@ca.usda.gov, or by phone at (925) 371-0154 Ext. 118.

RISK ASSESSMENT OF BIOFUEL CROPS AS INVASIVE SPECIES

by Jeff Raifsnider

University of California Cooperative Extension Weed Specialist Joseph DiTomaso and California Invasive Plant Council Executive Director Doug Johnson discussed various conditions that enable invasive species to spread and successful models for preventing their spread. They also compared characteristics of invasives with those of biofuel crops.

According to DiTomaso, only about 1-percent of more than 60,000 horticultural plants introduced to the United States have escaped and become problematic. California now has about 1,300 established,



Could switchgrass (above) become the next *Arundo donax* (right)?



may take 100 years. Yellow starthistle went 70 years before it took off. Different plants have different ways of overcoming 'lag phases'. Cultural changes like grazing practices and transportation corridors helped yellow starthistle overcome its geographic bottleneck," said DiTomaso.

According to DiTomaso, grazing practices and transportation corridors can spread annual grass species too. Human effects on an ecosystem such as changes in fire or flooding regimes, or nutrient additions and niche availability can also affect a species distribution. Increased introduction of genetic variability or mutations can overcome a genetic bottleneck. Sterile forms of plants are less likely to spread and so are less likely to be invasive.

Since a plant's suitability for different environments and climates affects its ability to spread, global climate change can, in some cases, greatly affect plant distribution. DiTomaso said, "Switchgrass doesn't do well in Mediterranean

climates like California's but it could still be a problem in rice."

The absence of enemies can lead to physiological changes such as the loss of secondary defense mechanisms. Hybrid vigor can provide competitive advantage to a plant such as salt cedar. The introduction of a dispersal vectors can also spread plants. Honeybees

act as the major pollinator for yellow starthistle as they are strongly attracted to its flowers. This leads to increased

seed production. Desirable characteristics of good biofuel plants such as rice, wheat, corn, soybeans, cotton, tomatoes and alfalfa are that they all grow easily but won't spread on their own because they require cultivation and other inputs.

Johnson said, "Characteristics of 'good biofuels' are similar to those of invasive species. They grow fast. They require few inputs. They are resistant to pests and diseases. Prevention of something from becoming a weed is a much more effective method of control than chasing it after it has spread."

According to DiTomaso, Australia and New Zealand follow good pre-introduction screening protocols known as Weed Risk Assessment Models (WRA). The WRA's are designed to reject likely invaders while accepting benign species based upon matters including species, biology, ecology, climate.

Characteristics shared by potential biofuel crops and invasive species:

- C₄ photosynthesis
- Long canopy duration
- Perennial
- No known pests or diseases
- Rapid growth in spring
- Sterile seeds
- Partitions nutrients to belowground structures in fall
- High water-use efficiency

Source: Raghu, et al. *Science* 313,1742 (2006)

non-native plants and almost two-thirds of them were intentionally introduced. DiTomaso explained the conditions that enable introduced plants to become established invasives.

"Some plants can become invasive within a few years of their establishment. Some plants

CHAPTER OFFICERS TAKE OFFICE

by Walt Bunter

Lisa Hokholt of Livermore is our new President Elect as a result of the March-April mail balloting for new Chapter officers. The President Elect position is a two-year term with the person advancing to Chapter President in their second year.

Ladi Asgill of Modesto and Ken Trott of Woodland were elected to the Executive Council for two-year terms as Directors. Pat Grover of Sacramento won reelection as Chapter Secretary for two more years and Walt Bunter of Davis was reelected as Treasurer for two more years.

These officers were installed on May 3 during the luncheon at our Annual Conference in Sacramento.

With the approval of the amendments to the Chapter's Bylaws at the Annual Business Meeting held on May 3rd, Article VIII, Section 1, increased the number of Council Directors from five to six, with the provision in Section 2 that at least one Council Director reside in the State of Nevada. Article XI, Section 4 of the Bylaws further provides for appointment by the Chapter Executive Council when vacancies in office occur between elections. As a current member of the Council already resides in the State of Nevada (Perkins), Tina Vander Hoek of Templeton was appointed by the Executive Council on May 4 to fill the vacant two-year position of Council Director.



Executive Council Members (from left) Ken Trott, Lisa Hokholt, Walt Bunter, Pat Grover, Ladi Asgill, Mark Steffek, and David Rose. Photo by Jeff Raifsnider.

In addition, with the resignation of Kristen Hughes, who had only completed one year of her two-year term, a one-year position of Council Director was vacant. The Executive Council on May 4 appointed Andrea Casey of Corning to fill the vacant one-year position of Council Director.

NEW CALIFORNIA-NEVADA CHAPTER MEMBERS

by Walt Bunter

We extend a GREAT BIG WELCOME to the following seven members who recently joined or rejoined the SWCS and our California-Nevada Chapter or transferred in from another state chapter. Chapter membership on June 7 was 183.

James Bill Daily - Reno
Tom Esgate - Penn Valley
Josh Fodor – Santa Cruz
Sajeemas Pasakdee - Fresno
Minerva I. Perez - Norwalk
April D. Stinson – Davis
Steve Wilkins – Willows

The 2007 SWCS Annual Conference will be held July 21-25 in Tampa, Florida. The conference theme is “Conservation Challenges in a Changing Landscape.”

Find more information and register at <http://www.swcs.org/en/conferences/>

CALIFORNIA-NEVADA CHAPTER SWCS LOGO SHIRTS AND VESTS AVAILABLE!

Price includes sales tax. Please add \$4.60 per item for shipping. Proceeds after expenses go to the Chapter Scholarship Fund. Send your order to our Davis address or via email to Walt Bunter at wbunter@pacbell.net

Silk Touch Sport Shirt - \$25.00

(\$30 for size XXL)

So silky smooth, it's hard to believe these shirts are made from easy-care, wrinkle resistant poly/cotton blend! Lightweight pique is soft and supple for a comfortable fit; shrinkage is minimal. This one is a winner for the whole crew: a shirt that is as wonderful to feel as it is to look at, and flatters all who wear it.

Fabric/Style: 5-ounce, 65/35 poly/cotton pique; flat knit collar and cuffs, double-needle armholes and bottom hem, side vents; metal buttons with dyed-to-match rims.



Ladies Shirts:

Color: Bark
 Size (number on hand): S (2) M (2) L (2)
 Color: Stone
 Size (number on hand): XS (1) S (2) M (1)
 L (1) XL (1)



Men's Shirts:

Color: Bark
 Size (number on hand): M (1) L (2) XXL (1)
 Color: Stone
 Size (number on hand): S (1) M (2) L (2)
 XL (1) XXL (1)

R-Tek™ Fleece Vest - \$35.00

Quality that goes the distance with a feel that's unbelievably soft. An anti-pill finish ensures this vest will look amazing long into the future.

Fabric/Style: 13-ounce, 100% filament polyester R-Tek™ fleece offers lightweight warmth; twill taping inside the neck with the armholes and waistband trimmed in Lycra; zip-close pockets.

Ladies Vests have Princess seams that offer a feminine fit in a style that's a natural for layering.



Ladies' Vests:

Color: Light Blue
 Size (number on hand): S (1) M (2)
 Color: Black
 Size (number on hand): S (1) M (2) L (1)

Men's Vests:

Color: Black
 Size (number on hand): M (1) L (2)
 Color: Navy
 Size (number on hand): L (1)



CALIFORNIA-NEVADA CHAPTER
SWCS

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FIRST CLASS

CALIFORNIA-NEVADA CHAPTER NEWSLETTER

WINTER 2007

RunOff is the official California-Nevada Chapter SWCS newsletter.

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Ladi Asgill, Director
Andrea Casey, Director
Steven Perkins, Director
Ken Trott, Director
Tina Vander Hoek, Director
Bruce Williams, Director

Escape the heat- stay inside and write an article for RunOff during the long hot summer!

Submit articles and photos for the next issue of RunOff by July 30, 2007.