

Plant Industry Division Newsletter



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The Nevada Department of Agriculture welcomes a New Chemist to Plant Industry

By: Jamie Greer

On June 14, 2010 the Nevada Department of Agriculture (NDOA) was pleased to announce Jim Zhang as the new chief chemist within the Plant Industry Division. Jim obtained his Ph. D. at the University of Nevada Reno and has spent more than twenty years working with chemical analysis in a research laboratory setting. He has plenty of knowledge and experience in HPLC, water, air, pesticide, fertilizer, and petroleum chemical analysis and sampling. In the past, he has established protocols and performed a variety of laboratory procedures.

As the chief chemist of the Plant Industry Division, Jim will oversee the overall operation of the state pesti-



New NDOA Plant Industry Chief Chemist, Jim Zhang, pesticide, fertilizer and antifreeze laboratories. His job will be to manage pesticides, fertilizer, and antifreeze product registrations to ensure compliance with federal and state regulations. In addition, Jim will maintain the appropriate quality control and assurance within the NDOA's laboratory and will represent Nevada in national chemistry forums.

Read More on Page 2!



NDOA announces new Specialty Crop Block Grant Coordinator



The Plant Industry Division would like to welcome Katie Jameson as the new Specialty Crop Grant Program Coordinator. Katie graduated from the University of Nevada Reno with a Bachelor's in Business Administration and Criminal Justice with an emphasis in Accounting. Katie has been employed with the State of Nevada for over ten years and worked for a few state agencies during that period including the Nevada Department of Corrections and the Nevada Attorney Generals Office. Katie has been with the Department of Agriculture...

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New NDOA Specialty Crop Grant Program Coordinator, Katie Jameson.

The NDOA Welcomes a New Chemist to Plant Industry

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..Jim is very grateful to be a part of the team within Plant Industry. While being the chief chemist he plans to accomplish multiple goals to develop and validate the chemical testing methods for the state of Nevada. He plans to keep the state of Nevada current with new data analysis techniques and maintain the high laboratory quality of data analysis that has existed in the NDOA in the past.

The NDOA laboratory samples commercial fertilizer and

antifreeze products. The sample testing is done to ensure the chemical products used in Nevada meet safety regulations. The NDOA enforces regulations to ensure any commercial fertilizer or antifreeze products meet standards and Nevada State Statues.

For more information regarding the Plant Industry Division Laboratory please contact Jim Zhang at 775-353-3778 or visit the NDOA chemistry lab webpage at http://agri.nv.gov/PLANT_Chemistry_Index.htm.

Mushrooms Grown in Nevada

By: *Ed Foster*, Plant Industry Regional Manager

In 1992, a U.S. company based in Kittanning PA named Sylvan, Inc. built a mushroom spawn facility in Dayton, Nevada. It was Sylvan's second spawn facility in the United States. The Sylvan, Dayton plant has rye delivered into a closed hopper system. The rye is sterilized, cooled, inoculated and sent through a closed system to a clean room where it is bagged. The airtight bags are then put into a temperature controlled warm growing rooms were the spawn starts to grow. Shortly after the spawn starts to grow, they move the bags to a temperature controlled cooler warehouse where they stop growing and are eventually shipped out. In 1994 the Dayton facility doubled its size to meet demand for their spawn product.



The Sylvan Plant in Dayton regularly supplies 7 of the 50 states in the U.S. The Dayton Sylvan plant started shipping to Mexico and South America, which necessitated a USDA Phytosanitary certificate to get

the product over the border. Phytosanitary certificates are required for international exportation of any plant products to ensure sanitation and health regulations are met. The Nevada Department of Agriculture runs USDA's Phytosanitary certification program in Nevada. All products regulated in this program must have an inspection before the certificate can be filled out, and the product is shipped.

USDA did not have protocol for a mushroom spawn inspection. Mushroom spawn is unlike any kind of regular fruit or vegetable so USDA put together a pilot inspection program specifically for this commodity. The criteria is essentially the date the grain was sterilized, means of sterilization (steam), the duration of treatment, and the spawn scientific name (*Agaricus bisporus*). They can ship off this inspection for 30 days meaning an inspection every month.

I took the responsibility of inspecting Sylvan at that time and ever since then...It's been my monthly inspection!

Sylvan is a very interesting corporate and agricultural success story. You can find out more about Sylvan at <http://www.sylvaninc.com/>.

Waste Pesticide Collection and Disposal

By: *Jon Carpenter*, Environmental Scientist II

"The program has served to safely dispose of over 75 tons of unwanted pesticides since its beginning in 1995!"

In June of 2010 the Nevada Department of Agriculture held its 40th waste pesticide collection event. The program has served to safely dispose of over 75 tons of unwanted pesticides since its beginning in 1995. The service, which is totally funded by pesticide registration fees, is free to all pesticide users including commercial applicators, agricultural producers, nurseries, and homeowners.

Pesticides include insecticides, weed killers, and rodent baits. Some commonly used products that have been taken off the market voluntarily or banned by the U.S. EPA have been disposed of through the program. These products include DDT, Chlordane, and Diazinon. Many products still available for use are disposed of simply because applicators use other management practices to control pests or they just don't want them anymore. All pesticide waste is eligible for disposal, however,

waste products like paint, antifreeze, oil, and batteries are not accepted.

Information regarding recycling and disposal of non pesticides is available by calling the Nevada Recycling Hotline at 1-800-597-5865. Discarding pesticides in the weekly trash and illegal dumping will cause environmental contamination including...



Figure 1:
Waste pesticides collected by the NDOA.

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...pollution of well water, creeks, and streams and ultimately improper pesticide disposal will result in adverse impacts on human health and the environment. Pesticide waste is packed and transported out of state to an EPA approved waste incinerator.

Recently, the Nevada Department of Agriculture teamed up

with Rail City Garden Center in Sparks for a one day event aimed at homeowners and backyard gardeners. Agriculture staff collected nearly 2000 pounds of waste from seventy participants who dropped off their unwanted pesticides at the nursery.

If you have questions about the pesticide collection program please call Jon Carpenter at (775) 353-3715 or email jcarp@agri.state.nv.us.

Weed-Seed-Free Producers Conclude another Successful Season

By: *Jamie Greer*, Assistant Program Coordinator

“This year Nevada grown forage products amount to over 90,000 small bales available for use”

The months of June through September have been steadily busy for the Weed-Seed-Free (WSF) Program Coordinator, Tina Mudd. This year the Nevada Department of Agriculture (NDOA) is pleased to announce that the WSF Program had twenty-three producers across the state. Nevada certified WSF products include grass hay, alfalfa hay, Timothy grass hay, mixed hay, straw hay and gravel materials.

Approximately 3,500 acres were inspected across Nevada for WSF certification. Each acre was walked and visually examined by an NDOA certified inspector before cutting. This is to ensure that the fields and end product is free of any viable parts of any of the federal or Nevada listed noxious weeds.

The use of WSF forage products is an important step to control the spread of noxious weeds across the state of Nevada. This year Nevada grown forage products amount to a total of over 90,000 small bales available for use. Certified WSF forage is accompanied by a “Certificate of Inspection” and a “Transit Certificate” that the producer obtains after the products have been certified. In addition, certified WSF forage is marked

with special purple and yellow baling twine (Figure 1). This designates the product is NDOA certified WSF.

The USDA Forest Service requires that all forage and straw transported onto federal lands must meet the North American Weed Management and Nevada WSF Program certification standards. Currently, the NDOA is also working with the

Bureau of Land Management (BLM) and Nevada Department of Transportation (NDOT) to achieve similar participation of requirement of the use of certified WSF products.

Lastly, the NDOA is pleased to announce the new WSF gravel program as an addition to the existing program. WSF gravel is gravel, rock, sand, or top soils that have been mined and provided from a pit that is free of any viable plants of any of the noxious weed species listed on either Nevada’s or the federal noxious weeds lists. This year the NDOA certified three gravel pits in the Carson and Reno areas. Using WSF gravel is important on new and existing construction projects because it prevents new Infestations of noxious weeds from starting. This program is at its beginning stages, and the NDOA is encouraged to see its success this year and in years to come.

Thanks to the hard work of multiple producers in Nevada that the WSF Forage and Gravel Program had another successful year. The NDOA is excited to continue improving the program and making a difference to prevent the spread of noxious weeds.

If you or anyone you know may be interested in becoming a grower or buyer of certified weed-seed-free products or for any additional information please contact the following at the NDOA:

Tina Mudd
WSF Program Coordinator
775-353-3640
tmudd@agri.state.nv.us

Jamie Greer
WSF Assistant Program Coordinator
775-353-3670
jgreer@agri.state.nv.us

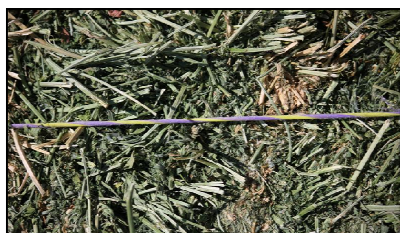


Figure 1: Specially marked purple and yellow certified weed-seed-free twine



Both fields shown were inspected and certified as Weed-Seed-Free this year from producers in Gardnerville, NV.

Right: The grass field of Nate Leising

Left: The alfalfa and grass fields of Clarence Burr.



NDOA announces new Specialty Crop Grant Coordinator

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...Fiscal Services section for three years. During that time Katie expanded her knowledge in budgeting, analytical analysis and the Executive and Legislative processes.

Although she has worked with most everyone in the agency for the last three years she is looking forward to the new and exciting opportunity to work with fellow staff and the public in a different capacity. Katie will work to improve this

important NDOA program with Ashley Jeppson as her Assistant Program Coordinator. Both are looking forward to working with the local growers and hope to expand the Specialty Crop Program to its fullest potential.

For more information on the SCBG, Katie Jameson can be reached at (775) 353-3639 or kjamesjon@agri.state.nv.us



Crops being grown in a hoop house in Fallon.



Hoop House Construction of one of last year's SCBG recipients in Owyhee, NV.

Nevada's Specialty Crop Grant

By: Ashley Jeppson

"Many sub-grantees have increased production and education through hoop houses, school garden programs, and specialty crop workshops."

As of December 21, 2004 the Specialty Crops Competitiveness Act of 2004 authorized the United States Department of Agriculture to provide grants to individual State departments of agriculture in order to enhance the competitiveness of specialty crops. This allows State departments to review eligible specialty crop enhancing projects that include but are not limited to: research, promotion, marketing, nutrition, advertising, food safety, plant health programs, and education. These projects will address issues affecting the specialty crop industry in order to increase the competitiveness of high-valued crops (fruits, vegetables, nuts and herbs) throughout the nation and individual states.

Various specialty crops and their sustainability in Nevada's climate have been researched since the start of the program in 2006. Many sub-grantees have increased production and education through hoop houses, school garden programs, and specialty crop workshops. As of Fall 2010, the following projects have been sub-granted through the Nevada Department of Agriculture:

- Nevada Grown Association** to create a website with information regarding specialty crop growers including profile pictures, production sites, and farm history. Producers will be trained on how to enhance consumer interactions and website skills.
- Fallon Convention & Tourism Authority,**

Tractors & Truffles to promote the event hosted by small farmers with the intent to bring consumers in touch with local specialty crop producers and to educate the public on food production.

-**Western Nevada College Specialty Crop Institute** to expand training provided for individuals interested in specialty crop farming to include proper record keeping and business management, a workshop on marketing and sales, and outreach to tribal and rural reservations to introduce hoop house production and season expansion practices.

-**NanaDew Herb Farm** to continue providing training on cultivation and marketing, extending the growing season through season extending crop protection materials, and continue offering education to student interns on the production and marketing of specialty crops.

-**Lincoln Communities Action Team** to incorporate a processing facility in Lincoln County to be utilized ... by producers and locals to process local value-added specialty crop food products in order to eliminate waste and optimize production and sale of specialty crop goods.

-**Nevada Small Business Development Center** to establish a farmers' distribution center at West Street Market in downtown Reno that will provide a regular delivery location for farmers producing specialty crops.

Read more on Page 5!



-Doubletree Ranch in Lovelock, Nevada to utilize hoop houses to determine what high-value specialty crops are sustainable and provide a larger variety of specialty crops to local farmers markets.

-Betsy Whipple, Hiko Union Stockyard and Vineyard to establish a vineyard and wine tasting facility in Ash Springs, Nevada to test an area not used for viticulture.

The NDOA is eager to find further projects that will enhance the competitiveness of high-valued crops. The next available application is estimated to be made available by spring (April-May) of 2011.

If interested in receiving information and upcoming deadlines email **Ashley Jeppson** with the NDOA at ajeppson@agri.state.nv.us. Additional information can be found at www.agri.state.nv.us.

2010 Certified Seed Production in Nevada

By: *Steve Marty*, Agriculturalist IV

“The 2010 garlic and onion crop are valued at \$1.5 million and \$40 million, respectively.”

Certified seed production in Nevada was down slightly for the 2010 growing season, largely the result of low alfalfa hay prices last year and a surplus of stored seed. However, Nevada growers produced certified alfalfa and grain seed on 1,745 acres this year with an estimated production of 1,720,250 pounds of clean seed. This is valued at approximately \$2.7 million.

Additionally, 250 acres of seed potatoes were field inspected, with 52 acres rejected for certification due to the presence of the potato leaf roll virus. All certified fields are inspected at least twice during the growing season by NDOA staff to verify genetic purity and the absence of injurious pests and diseases. Clean seed lots are then sampled and tested at the NDOA Seed Laboratory to ensure that purity and germination standards are met. Sampling and testing of 2010 production lots is currently underway.

496 acres of garlic seed were inspected for the pres-

ence of white rot (*sclerotium cepivorum*), a detrimental fungal disease for which a quarantine has been established in most western states. Five cases of white rot infestation (Figure 1) were found by NDOA staff, and portions of those fields were quarantined and will be treated to prevent the spread of the disease. Dr. Shouhua Wang of the NDOA Pathology Laboratory was responsible for the quick and accurate diagnostic work confirming the presence of *sclerotium cepivorum*.

3,692 acres of onions were field inspected for the presence of white rot, with no positive cases. A large portion of the 2010 garlic and onion crop, valued at \$1.5 million and \$40 million, respectively, will be exported, and documentation verifying freedom from white rot is required by most importing States or countries.

For more information on Nevada Seed Certification please contact **Steve Marty** at (775) 353-3773 or s_marty@agri.state.nv.us.



Figure 1:
White Rot Infestation on an inspected onion.



2010 Season Entomology Program Buzz

By: *Jeff Knight*, State Entomologist

Mormon Crickets and Grasshoppers

The Mormon cricket and grasshopper program wrapped up another successful season. This year crickets were at their lowest in eight years with only a small band being treated by ground baiting north of Elko. No aerial treatments were needed to be done on Mormon Crickets unlike in years past. As expected grasshopper populations were very high this year with the heaviest infestations at Battle Mountain, Paradise Valley, Orovida and Railroad Valley. The Department assisted Paradise Valley growers with a very successful private land treatment program that was coordinated locally by Tom Cassinelli. In addition, the De-

partment has a cost share program to help producers with grasshopper treatments. The Department reimbursed growers at a rate of 1/3 the total cost on pre-approved products used to treat grasshopper invasions. Reimbursements now total just over \$35,000 at this time.

Surveys

The invasive insect surveys are now winding down, with most of the over 2600 traps being picked up and checked. No target species have been found yet. The trap pick-up should be completed by the end of October; at that time the data summaries will be made. **Read More on Page 6!**

2010 Season Entomology Program Buzz

By: Jeff Knight, State Entomologist

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Grants

The entomologist is participating in a new grant with the Nevada Division of Forestry and the Cooperative Extension to train individuals to look for and report exotic wood boring insects. At least ten training sessions will be given throughout the state. These will be in conjunction with Master Gardener, nurseryman and pest control operator educational activities. Two sessions have already been completed with a total of over fifty attendees.

New State Records

The African painted bug (*Bagrada hilaris*) (Fig 1.) was first



Figure 1 (Left):
The African painted bug, *Bagrada hilaris*. Photo by Clint Jarvis, NDOA.

Figure 2 (Right):
NDOA Entomologist, Jeff Knight giving a presentation at the Horticultural Inspection Society Annual Meeting in Las Vegas, NV.

reported in Nevada early this summer. The first report came from Amargosa Valley and shortly after that more samples were submitted from Las Vegas and Overton. This insect was first reported from the U. S. in Los Angeles, California in the Fall 2008. It is now found throughout southern California, southern Nevada and Arizona. This insect is considered a severe pest of crops in the mustard family which includes radishes, cauliflower, cabbage and broccoli. This fall and next spring we will inspect perennial pepperweed in southern Nevada to see if this pest is feeding on it.

For more information please contact Jeff Knight at (775) 353-3767 or jknight@agri.state.nv.us .



Horticultural Inspection Society Annual Meeting Hosted by the NDOA

By: Peggy McKie, Agriculturist IV

The NDOA hosted the 10th Annual Meeting of the Western Chapter Horticultural Inspection Society (WHIS) October 4-7th. Departments of Agriculture from 6 states sent inspectors to this year's gathering which marked a return to the site of the Western Chapter's first meeting 10 years ago – Las Vegas, Nevada.

WHIS strives to promote high standards of inspection by combining and sharing knowledge, experience, and training among plant pest inspectors. Membership is limited to state, county and federal employees engaged in plant inspection work as inspectors or supervisors, in field, laboratory or office, other than administrative personnel. Annual meetings are rotated between states in the western region. Meetings consist of one full day of lectures and/or hands-on training, one full day of field trips, and one half day for a business meeting.

This year's lecture topics included presentations by USDA Plant Protection and Quarantine on emerging pests of concern (Dawn Holzier), disorders of palms (ML Robinson), pest management strategies for the small commercial orchard (Robert Morris), new trees for the arid west (Dennis Swartzell), and a hands-on workshop for help in identifying wood boring beetles (Jeff Knight and Robert Little) (Figure 2 above). Andres Garcia from the Bellagio Las Vegas described what its like to practice horticultural in a 24-hour attraction in which perfection is required 100% of the time. Nevada Department of Agriculture nursery inspector Marv Berson's presentation about inspecting nursery stock in southern Nevada highlighted the challenges of inspecting nursery stock in Las Vegas.

NDOA Entomologist Jeff Knight and CAPS coordinator Robert Little prepared a hands-on workshop focused on wood boring insects such as Asian long horned beetle, emerald ash borer, and non-native invasive wood wasps. Participants were provided with microscopes and samples of a variety of wood-boring insects to identify, as well as plenty of examples of damage caused by these insects.

Field trip destinations included a behind the scenes tour of the Wynn/Encore by Wynn horticulturists Jim Gibbons and Kevin Potts, the gardens of Spring Preserve with a tour by Linn Mills, and a visit to Red Rocks Conservation Area to discuss desert native plants.

For more information contact Peggy McKie at (775) 353-3672 or pgmckie@agri.state.nv.us.



Beyond Our Backyard: Montana State University Explores New Uses for Invasive Plants

It is estimated that over 11 million acres of BLM lands in Nevada are infested with invasive weeds. Millions of dollars are spent each year to control noxious weeds. The war on weeds is a never ending cycle in Nevada and multiple parties continually work together to prevent Nevada lands from being completely infested with noxious weeds.

However, Nevada is not alone. Many other states in the western United States are battling invasive and noxious weeds as well. One such example is Montana State University (MSU) and their plans to partner with multiple other states to consider converting invasive plants to fuel. The following is a condensed version of an article by Evelyn Boswell with the MSU News Service:

October 06, 2010 -

BOZEMAN -- Invasive plants make life tougher for farmers and ranchers, so why not turn the plants into fuel and make some money at the same time?

Russian olive and saltcedar (Figure 1) alone could supply biomass far into the future, according to weed experts throughout the region. Converting invasive plants to fuel is an intriguing idea

that's being investigated by partners in a regional project headed by the [Center for Invasive Plant Management](#) (CIPM) at Montana State University and the Missouri River Watershed Coalition, said project director Liz Galli-Noble, also CIPM director.

The center and MSU were recently awarded \$1 million from the Natural Resources Conservation Service, Conservation Innovation Grant program, to develop innovative ideas for managing invasive plants and work with public and private partners in multiple states.

Dense invasive plant infestations choke river systems; restrict access for irrigation, wildlife and recreation; reduce water quality and quantity; and degrade or eliminate habitat for wildlife and livestock. More than a million acres in the western United States are infested with Russian olive (*Elaeagnus angustifolia*) and saltcedar (*Tamarix spp.*) alone.

"It's a huge supply of currently unwanted and untapped biomass," Galli-Noble said.

A major component of the project is focusing on the feasibility of turning saltcedar and Russian olive into biofuel. Organizers said it will include setting up demonstration sites and conducting workshops that show how existing technology can use Russian olive and saltcedar biomass as a feedstock for pelletization, bio-briquette production, gasification and other bioenergy production.

If the idea works, Galli-Noble said it could spread across the West and the rest of the nation and benefit many landowners and managers. Besides providing an income to offset the costs of controlling invasive plants, she added that this innovative technology has the potential to develop community-based jobs, produce an effective energy source, improve the quality and reduce the cost of grazing land restoration, enhance fish and wildlife habitat, reduce the threat of wildfire, and promote long-term conservation strategies on high-value riparian lands.

For the full article go to <http://www.montana.edu/cpa/news/nwview.php?article=8903>.

For more information regarding this topic, visit the coalition Website at <http://www.weedcenter.org/mrwc/index.html>



Figure 1: The noxious weed Tamarisk.
Photo Credit: Steve Dewey, Utah State University, Bugwood.org

SAVE THE DATE!

**Nevada Small Farm Conference Fallon, NV
March 9-11, 2011**

For more information contact Ann Louhela at louhela@wnc.edu



If you would like to be officially added to the Plant Industry Division Newsletter electronic or hard copy mailing list please contact Jamie Greer, at jgreer@agri.state.nv.us or 775-353-3640



NEVADA PEST ALERTS

Sign up now for the NDOA's email "Pest Alert" Service to receive information about emerging invasive plant pests of concern to you as a landowner or business manager.

Do this by emailing the Nursery Program Coordinator, Peggy McKie at pgmckie@agri.state.nv.us.



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<http://www.agri.state.nv.us/>



AGRICULTURE IN NEVADA?

Yep, It's our third largest industry.

A message from the Nevada Department of Agriculture & Ag Council of Nevada

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