



Advice to Grow by... Ask Us! Master Gardener Program

University of California Cooperative Extension



Issue #36

Amador/El Dorado County Master Gardener E-News

January 2013

Controlling Starthistle

John E. Otto, Amador County Master Gardener



In the California foothills, Yellow Starthistle is perhaps the most common and concerning invasive plant. It impacts much of our open space, agricultural and rangelands, as well as intruding into our neighborhood landscapes. The impact to large range and agricultural lands is primarily the concern and responsibility of ranchers, large property owners and the County Agriculture Department. But more and more individual homeowners are becoming the key to containing and eliminating this invasive plant, wherever it exists.

If you see Yellow Starthistle, take steps to get rid of it! Talk to your neighbors and anyone else you come in contact with. Let 2013 be the year we stop the spread and begin to eliminate Yellow Starthistle. You can start now - January is the time to apply pre-emergent herbicides.

What Does it Look Like?

Yellow Starthistle is a gray-green to blue-green annual plant with a vigorous taproot. The stems of mature plants are rigid, wing shaped, spreading and branching from the base. The plant has deeply lobed basal leaves (2 to 3 inches long), and short, narrow, sharply pointed upper leaves (0.5 to 1 inch), which allow the plant to catch lots of water. The leaves are covered with loose, cottony hairs that give them a whitish appearance. Yellow Starthistle produces bright yellow flowers with sharp spines surrounding the base of the seed head. The plant grows to heights varying from 6 inches to 5 feet, depending on sun exposure and moisture availability. [See pictures of Starthistle's growth stages on page 4.](#)

Why Do We Care?

Yellow Starthistle currently infests more than 15 million acres of land in California and has a huge impact to recreational and agricultural lands. Not only does it prevent recreational use, like walking or hiking, but it chokes out the native grass and wildflowers. It is also poisonous to horses, causing a neurological disorder called "chewing disease" which can be fatal once

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Contact Your Local Master Gardener

Amador County
209-223-6838

Office hours: 10 am—Noon
Tuesday—Thursday
mqamador@ucdavis.edu

El Dorado County
530-621-5512

Office hours: 9 am—Noon
Tuesday—Friday
mgeldorado@ucdavis.edu



Controlling Starthistle, Continued from Page 1

symptoms develop. It provides minimal nutrition to livestock compared to native or other grazing grasses.

For those of us who are concerned with water, Yellow Starthistle steals great quantities of water from other plant life, and its deep roots greatly diminish our ground water. It is reported that this invasive plant accounts for a loss of 15 to 25% of annual precipitation. It is estimated that in 2004 approximately 46,000 acre feet (1.5 billion gallons) of water was lost to the Yellow Starthistle within the Sacramento River watershed alone.

Plant Growth Cycle:

Yellow Starthistle is an annual which flowers from mid to late summer and can produce up to 10,000 seeds per plant. Approximately 95% of those seeds are viable as soon as they disperse. Most seeds germinate within a year, but some can remain viable in the soil for more than three years. Yellow Starthistle seeds begin to germinate in the fall with the first rains. Seeds continue to germinate through late spring as long as there is adequate soil moisture. The first few months of growth are known as the seedling stage. During this period the plant focuses its growth on root development. As the plant continues to grow it begins to develop leaves (rosette stage), making it hard to identify from other plants. By late spring to early summer, the plant will initiate the bolting stage of rapid growth and produce a fluted stalk. This bolting stage is followed by the flowering stage, usually in late summer, when the plant produces its spiny head and yellow flowering seed head. The flowering seed head produces the seeds for the next year.



Starthistle Seedling



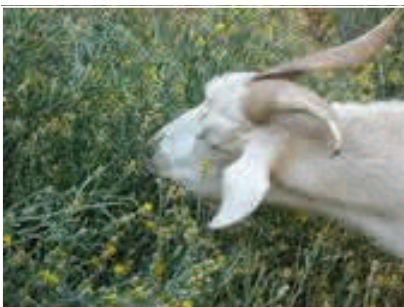
Starthistle Rosette



Starthistle
Early Bolt

How Do We Control It?

So how do we control it? There are several methods, including:



Goat grazing on Starthistle

1. Mechanical: Hand pulling, hoeing, tilling and mowing.
2. Cultural: Grazing, burning and re-vegetation.
3. Biological: Releasing various insects and/or pathogens.
4. Chemical: Application of pre-emergence or post-emergence herbicides.

Of the above four methods available, many are not practical for the homeowner. It is unlikely that most homeowners can apply grazing, burning and re-vegetation or purchase and release specialty insects and pathogens. Even large scale tilling is more appropriate for the large commercial agricultural farmers.

Continued, Page 3

Controlling Starthistle, Continued from Page 2

So, the best control methods for the homeowner are Mechanical and Chemical.

Mechanical Control: Is most effective for small patches but correct timing is critical.

Hand pull or hoe (cut off the roots), after bolting (May), but before flowering (June-July).

Tilling can be done to detach the roots and is best done in May-June, before flowering and viable seeds are produced. This method may not give the best results because soil disturbance may bring new seeds to the surface.

Mowing or weed wacking is best done after bolting (May), but before flowering (June- July). Cutting twice per year is recommended for best results.

Chemical Control: There are several herbicides available to the commercial agricultural operator, which are only applied under registration and not available to homeowners. These herbicides include active ingredients of either Aminopyralid (under brand name Milestone), Triclopyr (brand name Garlon), Clopyralid (brand name Transline), and several others.



There are currently only a few herbicide products which homeowners can obtain right off the retail shelves to kill Yellow Starthistle. The active ingredients to look for are Glyphosate found in many brand names including "Remuda" by Monterey, and "Round-Up" by Monsanto; or Clopyralid found in recently available "Star Thistle Killer" by Monterey.



Glyphosate is a post-emergent herbicide, meaning that it is applied to green growing plants. This herbicide is "non-selective", meaning that it will kill most plants that it comes in contact with. Follow the manufacturer's instructions but generally application is recommended at the bolting, spiny and early flowering stage. Apply spot treatments (individual plants), after the last spring rain (March-April). Apply broadcast / wide-spread treatment after annual grasses and other desirable annuals have died, but before the Yellow Starthistle flowers (June-July).

Clopyralid is a pre-emergent and post-emergent herbicide, meaning that it can be applied before the seedling emerges as well as when the plant is in the growing stages. This herbicide is "selective" meaning that it will kill only specific broadleaf plants, and not affect most grasses. Follow the manufacturer's instructions but generally application is recommended at the seed, seedling, and until early bolting stages (January-April).

Attention when using herbicides:

- Remember to read the label and follow all requirements.
- Wear personal protective equipment when applying.
- Avoid sensitive areas (water bodies, non-target plants).
- Avoid drift.

References:

- "[Yellow Starthistle Management Guide](#)", by the California Invasive Plant Council, Sept. 2006
- <http://www.cal-ipc.org/ip/management/pdf/YSTBiology.pdf>
- http://ucanr.edu/sites/uccelr/Range_improvements_and_management/Yellow_Starthistle/
- <http://www.ipm.ucdavis.edu>

Starthistle Growth Stages & Root System

These pictures provide a closer look at the Yellow Starthistle's growth stages and root system.



Seedling



Rosette



Early Bolt



Late Bolt



Flowering Head



Seed & Flowering Heads



Fully Flowering Bush



Root Lengths extend to over three feet



A Way Starthistle Spreads

Caring For Holiday Plants After The Holidays

Plants with colorful blooms add a touch of holiday cheer to your home. Keep them beautiful after you pack your holiday decorations following these tips.

Christmas Cactus (*Schlumbergera*)

- Keep in sunny locations indoors.
- Water when top half of soil feels dry to the touch.
- Fertilize monthly during late winter through the summer with a 10-10-10 mix or with something similar; reduce in fall and early winter.
- Needs 13 hours of darkness in October for 2013 holiday bloom, or night temperatures of 50 to 55°F in early November.
- Propagate by pinching stems sections off and rooting in moist vermiculite.



Cyclamen (*Cyclamen persicum*)

- Give bright indirect light.
- Prefers temperatures between 50-60°F; dislikes temperatures above 60°F.
- Prefers moist, well-drained soil. Don't over-water.
- Fertilize twice a month using a complete houseplant fertilizer with iron.
- Cut back on water and fertilizer after bloom; let soil dry out and store pot in a cool place over summer.
- Repot and water when growth starts in the fall.



Poinsettia (*Euphorbia pulcherrima*)

- Give bright, indirect sunlight.
- Prefers 65°F days, 60°F nights.
- Let soil dry out between watering.
- Stand pot on a layer of pebbles to keep plant out of water and to increase humidity.
- Apply houseplant fertilizer once a month if you keep it past the holiday season.
- Can be reflowered the following Christmas, but unless a year-long schedule of care is observed, the results usually are not good.



UCCE Gardening Books

Sue McDavid, El Dorado County Master Gardener

Is one of your goals this year to have the garden of your dreams?

Are you looking for proven resources to guide you? If so, come to the free Master Gardener classes this year and consider purchasing a great reference book from the UC Agriculture and Natural Resources.

These guides and books contain a wealth of knowledge, with information that is research-based and loaded with pertinent techniques relevant to all aspects of home gardening.

One of the most useful publications for home gardeners is the California Master Gardener Handbook. Many times, gardening books and magazines are geared toward east coast locations, but this bestseller is truly a definitive guide to gardening in California.

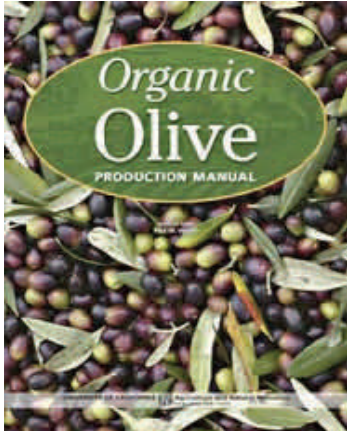
Topics range from an introduction to horticulture to diagnosing plant problems; it contains 22 chapters filled with excellent information that anyone interested in gardening can use. This book is available for purchase for \$30 at all of our public education classes and in the UC Cooperative Extension offices. It is currently unavailable online, but keep checking for it while becoming acquainted with the myriad of other books available through the ANR Catalog online at www.anrcatalog.ucdavis.edu.



Do you have plans to put in a small backyard orchard?

There are several helpful UC publications that are chock-full of information about planting and caring for anything from apples to walnuts. "The Home Orchard", a bargain at \$25, is one such book written specifically for small-scale growers; it describes how trees grow, which species grow best in California's different regions and soils, which varieties to select, preparing the soil, planting, watering, fertilizing, pruning and much more. Another good tool to have is a set of the laminated, pocket-sized "Tree Fruit Pest Identification and Monitoring Cards" which you can carry around while in the orchard for handy reference. These cards retail for \$15.

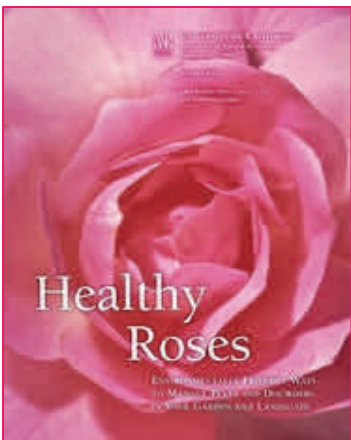
UCCE Gardening Books, Continued from Page 6



Interest in olive-growing has spiked in recent years and the University of California has definitive guides to olive production in California - the "Olive Production Manual", for \$35, and the "Organic Olive Production Manual" for \$18.



They both provide detailed information on getting started in olive growing, olive oil production and specific olive pest management.



For flower enthusiasts, "Healthy Roses" (\$10) is a must-read for growing vigorous roses, and has the added benefit of illustrations with over 50 color photographs. Management of pesky critters in the landscape is covered in "Pests of Landscape Trees and Shrubs" (\$42); this book will explain why Integrated Pest Management is the ultimate in managing bad critters using less toxic means.

Explore the benefits of the biodiversity and the beauty of songbirds, bats, and owls with "Songbirds, Bat and Owl Boxes" (\$15). While this guide was written with grape growers and vineyard managers in mind, anyone interested in learning about nest boxes will find it useful. The book contains ideas and methods for integrating nest boxes in your landscape, details on construction and maintenance, and an extensive bibliography for additional resource information.



What's Happening At The Master Gardener Office Gardens?

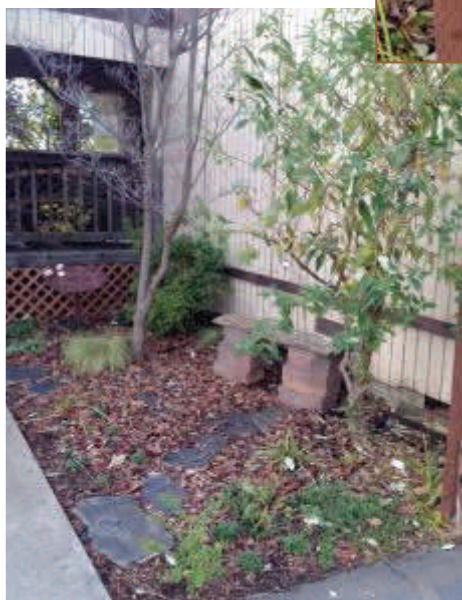
Stop by to see what the Master Gardeners have done to their gardens outside of their offices. You may get some ideas of your own. The gardens may cause you to ask questions about your own garden. And you may just enjoy looking at the plants!



Amador County MG Office Garden



The Butterfly Bush bloomed into early December thanks to the shelter of the building



El Dorado County MG Office

The weather has kept the Master Gardeners out of the office gardens this month! Rain replaced our irrigation system and wind replaced our raking. Luckily the gardens had been cleaned and plants had been pruned so there wasn't much maintenance required. Both gardens will soon get a refresher layer of mulch for winter protection and natural fertilizer.

During the next nice day in Amador County, the Master Gardeners will check for sprouting weeds. It's good to get them as seedlings before they get out of hand. When the soil is not so wet they will divide some of the succulents and add a few more plants.

El Dorado County's First Edible Landscaping Workshop - January 26, 2013

Master Gardeners Workshop

\$15 PER PERSON, LUNCH INCLUDED

REGISTER ONLINE

<http://ucanr.edu/edmg-reg>

BY PHONE: (530) 621-5528





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EDIBLE LANDSCAPING

UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION
AGRICULTURE & NATURAL RESOURCES

Learn the basics of:

- Planning & Design
- Planting & Maintenance
- Harvesting, Storing & Food Safety

For more detailed course information go to <http://ucanr.edu/edmg-jan26>

SATURDAY, JANUARY 26, 2013

9 A.M. - 4 P.M.

EL DORADO HILLS FIRE STATION #85

1050 WILSON BLVD.

EL DORADO HILLS, CA 95762

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EL DORADO COUNTY MASTER GARDENERS

311 Fair Lane
Placerville, CA 95667
Phone: 530-621-5522

Sign up for the El Dorado County Master Gardeners first Edible Landscaping Workshop!

Saturday, January 26, 2013
 9 a.m. - 4 p.m. (Please arrive at 8:30 for check-in, we will begin promptly at 9:00.)
 El Dorado Hills Fire Station #85, 1050 Wilson Blvd.
 El Dorado Hills

Topics covered in this 7-hour workshop include:

- Introduction to Edible Landscaping
- Design and Planning
- Planting and Maintenance
- Harvesting, Storage and Food Safety

A light breakfast, box lunch, and beverages will be provided. Please note that although there is no charge for the workshop, we do ask for \$15 to cover the cost of the food, to be paid in advance. (Note that this price is lower than what was previously advertised.)

Space is limited to 100 participants and pre-registration is required by **January 23, 2013**. To register, visit the El Dorado County Master Gardener workshop registration webpage at <http://ucanr.edu/edmg-reg>. Or sign up in person at the Bethell-Delfino agricultural Building at 311 Fair Lane in Placerville, Monday through Friday, between 8 a.m. and 5 p.m. (Closed between 12 p.m. and 1 p.m.)

Last Call! 2013 Amador County MG Training Program

Do you want to teach others about home gardening? There are a couple of spots left in the 2013 Amador County Master Gardener program training. We are looking for adults who are excited to educate our community through presentations, articles, farmers market booths, and researching answers to phone/email/in-person questions.

How to Apply?

- Apply online at <http://ucanr.edu/acmg2013>
- Interviews will be in mid-January



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El Dorado County MG Demonstration Garden

Sue McDavid, El Dorado County Master Gardener



The Master Gardeners of El Dorado County are beginning to see a light at the end of the tunnel with regard to our planned demonstration garden. Much progress has been made to date and we hope to be operational by the end of next year.

Five acres of land belonging to the El Dorado County's Office of Education were set aside a few years ago for educational purposes, and the Master Gardeners received approval to design and maintain a demonstration garden within a section of the property. The garden site is located behind the local community college and has already been greatly transformed. Grading is nearly complete, a potting/storage shed is up and operational, a Japanese garden arbor is in place, a small greenhouse is on site, irrigation and electricity are available, cobble rock has been put into a riverbed with a couple of short bridges built over it, retaining walls are being placed and a gazebo is being designed for the rose garden area. Walkways of decomposed granite are planned, but these won't be completed until after all the hardscape and plants are in.

Themed areas will include roses, native plants, vegetables & herbs, succulents & cacti, a children's garden, a butterfly garden, a cottage garden, Mediterranean/Xeriscape plants, perennials, ornamental grasses, shade plants, bog plants and orchard trees. Each garden has a committee to do the initial labor and ongoing maintenance.

Funding for the garden comes from twice-yearly plant sales put on by the Master Gardeners, donations from the community and grants. It's an ongoing process, but one that will result in more outreach to our community in order to educate the public on research-based sustainable home gardening practices through hands-on demonstrations. Plans for the future include holding our weekly public education classes at the demonstration garden.

Master Gardeners in El Dorado County are extremely excited about this project and will be posting updates and photos periodically to show how things are progressing.

Demo Garden Construction Wish List

The El Dorado County Master Gardeners are looking for donations or great prices on the following items.

- River rock (for stream bed)
- 10' pine lodge poles
- Stepping stones for shade garden
- Retaining wall blocks
- Hardware cloth
- Lumber for raised beds (2x12)
- Decomposed Granite for walkways

If you have information about any of these items, please contact the El Dorado County Master Gardeners office at 530-621-5512. Thank you!

*



Public Education Classes & Events for Amador and El Dorado Counties – Free!!



*Most classes are from 9 a.m. – Noon.
Please call ahead to confirm locations.
Click on the class title to go to our public website and
schedule an email reminder for the class.*

Amador County

Unless otherwise noted, location for all Amador classes: GSA Building, 12200-B Airport Road, Jackson.

January

19: Hillside Landscaping and Controlling Yellow Starthistle

The day starts with Hillside Landscaping. Do you live on property that is sloped? Learn how to improve your site with different types of terracing, diverse and beautiful plantings, as well as erosion control principles and solutions. See examples and good suggestions of beautiful plantings which also conserve water.

Next - there is hope! The prickly invasive Yellow Starthistle plant which has become a real problem in many areas of the foothills, but the weed can be controlled. Come to this class to learn proven techniques and procedures for home owners. It takes time and a consistent attack, but you can win the battle against Yellow Starthistle.

El Dorado County

Unless otherwise noted, all El Dorado County classes will be at the Veterans Memorial Building, 130 Placerville Drive, Placerville. Questions? Call 503-621-5512.

5: Pruning & Remedial Pruning of Deciduous Fruit Trees

Master Gardener Walt Miller will conduct the class, which will present and discuss the following: The physiology of tree basics on how and when they grow, how to prune to minimize injury to the tree, when to prune and when not to prune, and what to prune to establish a structurally sound tree which produces fruit.

12: Rose Pruning

Join Master Gardener Julianne Melchor as she presents a class on proper pruning of roses. The proper tools to use will be discussed as well as the right time of year to prune and different techniques for various rose varieties. There will be hands-on demonstrations

19: Top 20 Gardening Hints

Master Gardeners share their top twenty hints for successful seed starting, propagating by cuttings and divisions, and general suggestions on how to get the most bang out of your gardening buck.

- Why pay top dollar for your vegetables and bedding flowers when many are so easy to grow from seed?
- Why buy potted perennials when some are just begging to be multiplied by cuttings or divisions?

Our Master Gardeners Mike Pizza, Sheri Burke and Sue McDavid share and demonstrate these and many other secrets of gardening success such as;

- making an inexpensive "tabletop" greenhouse
- mixing your own potting soil
- making creative pots and vases
- making strawberry pyramids for the patio/deck
- making tomato towers for the patio/deck
- constructing never-to-be-forgotten colorful sweet pea "Maypoles"
- multiplying that awesome Amaryllis
- saving and sharing your seeds
- moving the "baby" nursery to the back yard
- bird and squirrel proofing your fruit and vegetables
- and much, much more!

26: Edible Landscaping Workshop

*Location: El Dorado Hills Fire Station #85.
Reservations required. See page 9 for details.*

Check out the El Dorado Master Gardener Facebook page at <http://www.facebook.com/pages/El-Dorado-County-Master-Gardeners/164653119129>.



Master Food Preservers Classes In January

Click on the class title to go to our public website and schedule an email reminder for the class.

Amador County

January 12, 10-Noon: Contents Under Pressure

Location: Amador County GSA Building, 12200-B Airport Road, Jackson

Be confident about pressure canning! Learn how a pressure canner works, how to safely use it, and watch several canning demonstrations to learn how to can your own broths, soups, stews, vegetables, and meat sauces. *No reservations required.*



El Dorado County

Until the free public education classes start this summer, the El Dorado County Master Food Preservers are available to answer any questions you may have about home food preserving. In addition to the question/answer phone line, the Master Food Preservers are available to talk to your group or organization about safe food preserving. This is a free service for the community.

For questions about safe home food preservation, or to schedule a speaker for organizations or clubs on the topics of food safety or food preservation, contact the Master Food Preservers at (530) 621-5506 or mpfeldorado@ucdavis.edu.

Pest Notes

Free Pest Notes are available on a variety of topics. For more information, call or email your local Master Gardener office.



To explore the Pest Notes on the UC Integrated Pest Management (IPM) website, go to <http://www.ipm.ucdavis.edu>.

Amador & El Dorado counties Master Gardener Newsletter

Editor: Sue Mosbacher

Layout Editor: Kim Cohen

Not on our e-newsletter distribution list yet? Know someone who would like to receive our newsletters and notifications on classes and events? Sign up online at <http://ucanr.org/mgenews>.

Get Answers to Your Gardening Questions Online

http://cecentralsierra.ucanr.edu/Master_Gardeners

- Information about Master Gardeners and even how to become one
- List of public classes
- Calendar of Master Gardener events
- Useful links to gardening websites
- Home gardening publications

Got a specific question? Just email us!

Amador: mgamador@ucdavis.edu

El Dorado: mgeldorado@ucdavis.edu



UC
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