The “Waterboxx”—Using Nature’s Way to Water Trees

Bill Tietje and Royce Larsen, UC Cooperative Extension

Santa Barbara County residents often want to plant a tree or two in the far corners of their property but find it challenging given the climate, with irregular winter rains and no summer rainfall to keep the newly-planted trees green and growing. A devise that has recently come onto the market is dubbed the “Groasis Waterboxx”. According to the website (Groasis.com) the Waterboxx has proven effective at “self-watering” new plantings, even in a truly desert climate.

Recently, we started a trial to test the Waterboxx by planting some oak seedlings and elderberry plants in a remote area. The Waterboxx is a round plastic “box” that fits around the tree trunk. The inward-slanting corrugated top cools during the night and channels condensed dew and heavy fog that collects on the top to the base of the tree. The Waterboxx also provides some protection for the newly planted tree and reduces the evaporation of water from the soil around the base of the tree, important additional benefits for new plantings. Once the tree is established, the Waterboxx can be removed and reused for another plant. Placing a collar around a tree that collects moisture and at the same time provides some protection can be a big incentive and a boost to getting that tree started that you should have planted 20 years ago.
As you can see, the Waterboxx can be a big help as an alternative to carrying water to distant areas or setting up a drip system. For more information about the Waterboxx, contact the UC Cooperative Extension Office in San Luis Obispo or go to the Groasis Waterboxx website: Groasis.com. On the website you will notice that the inventor of the Waterboxx is providing users the opportunity to provide information on the growth and survival of their plantings. You may want to check it out.

The Native Tree Committee of San Luis Obispo County
Royce Larsen and Bill Tietje, UC Cooperative Extension

In 1997 a committee was formed by the San Luis Obispo County Planning Department to discuss oak removals in the county and possibly develop a county-wide tree-removal ordinance. Instead of an ordinance, however, the BOS passed Resolution No. 97.529 that called for the adoption of Native Tree Management Guidelines and formation of the Native Tree Committee of San Luis Obispo County (NTC) to implement the voluntary Tree Management Guidelines.

The NTC has met monthly since January of 1998 (13 years), usually in the San Luis Obispo County Cooperative Extension Auditorium. Chairs of the Committee have been Dick Montegue, Co-chairs Eleanor Troucchio and Bill Weitkamp, and currently, Co-chairs Tina Salter and Dan Westigard. The University of California Cooperative Extension’s role has been to support the NTC with educational programs. Activities of the Committee include oak tree seedling growing and distribution with several local high schools; the writing and distribution of two brochures: Guidelines for Native Tree Planting and Native Tree Management Guidelines; development of a Power Point with narration of Oak Management Guidelines and presentation (by volunteers) at county meetings; and a Native Tree Committee of San Luis Obispo County Stewardship Award presented annually. In 2004, a subcommittee of the NTC assisted the development of an oak management plan, a prerequisite for submitting a request for an education grant under the California Wildlife Conservation Board’s Oak Woodland Management Act of 2001. In April, 2004, the BOS approved the management plan. Subsequently, the UC Cooperative Extension applied for and received a grant from the Wildlife Conservation Board for the outreach program “Learning and Working Among the Oaks”. “Learning Among the Oaks” developed an interpretive trail on 15 acres of the Santa Margarita Ranch adjacent to the K-6 Santa Margarita Elementary School. Since 2006, “Learning Among the Oaks” has brought the oak woodland to the classroom (and to ranching families) via trail activities. A primary objective of “Learning Among the Oaks” has been to develop and implement a Ranching Sustainability Analysis System (RSA) for ranchers, patterned after the Central Coast Vineyard Team’s Positive Points System. A rancher committee, Cooperative Extension workshops, and NTC taglites have supported the development of the RSA during 2006 to present. NTC taglites are talks or demonstrations on oak regeneration, oak woodland management, wildlife, water quality and range management.

The NTC is a voluntary committee made up and directed by stakeholders. The program can be effective in the teaching and the implementation of range management practices and, importantly, a tool to gain public support for voluntary resource conservation—instead of regulations. The NTC was set up by private landowners and has been supportive of farming and ranching. It can continue to do that. At this time it is uncertain if the voluntary approach to oak management will continue. The new Conservation Open Space Element discusses preparing a countywide native tree protection ordinance. Also, the NTC is currently trying to determine what kind of future activities should be done. There is always more room for private landowner participants in the NTC. If you have any interest in participating, or would like more information, please contact Royce Larsen at 805-434-4106.

Interpretive Trail
Santa Margarita Ranch
April, 2010
North San Luis Obispo County Habitat Conservation Program (NSLO)
San Luis Obispo County / City of Paso Robles

The County of San Luis Obispo and the City of Paso Robles have initiated the development of a multiple species habitat conservation program for the north and eastern portions of the County. The goal is to prepare a Habitat Conservation Program in support of Federal and State permitting processes.

The program objectives are to provide for conservation of endangered species and permit the incidental "take" of species if it occurs during specific activities. Covered species in the program would include the San Joaquin Kit Fox and others which will be determined through program development. This type of program is intended to provide for a streamlined process for development projects that require discretionary permits from either the City or the County, and that may potentially result in "take" of a covered endangered species. The public will be encouraged to participate in the development of this project by providing input and feedback through several public workshops and outreach opportunities. Workshops will be scheduled throughout the process of preparing the plan. Reference documents and project information will be posted on this website on an on-going basis.

http://www.slocounty.ca.gov/planning/environmental/biological_resources/NSLOC.htm

If you have any questions regarding this project, please contact: Susan DeCarli, Planning Manager, at (805) 237-3970 or by email, sdecarli@prcity.com or Trevor Keith, Project Manager, San Luis Obispo County at (805) 781-1431 or by email at tkeith@co.slo.ca.us.

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Beef Quality Assurance
Program Practices
Are You Certified?
By John Maas, DVM, MS, DACVN, DACVIM, Extension Veterinarian, University of California, Davis

Over the past three years, we have certified nearly 500 producers in California’s Cow-Calf Beef Quality Assurance (BQA) Program. These have been put on to certify producers for the first time as well as for recertification to comply with national guidelines to recertify on a three-year basis. So, if you were one of the nearly 200 producers who attended a BQA program in 2008, you will need to certify again this year to stay current in the program. As we start another round of BQA certifications in 2011, and as many California producers are re-examining their cattle health regimen before brandings this spring, I’d like to discuss some factors that affect the immune response of the calves when we vaccinate them as part of the BQA practices we all put in place.

A large part of BQA is prevention of disease so the animals do not have to be treated after weaning, shipping or in the feedlot. Vaccination against the common diseases is an important part of disease prevention. For vaccination and the animal’s immune response to work appropriately, a number of steps (links in the chain) have to all work together. First, we need to present an appropriate antigen (vaccine) to the animal via injection or intranasal inoculation. The vaccine antigen has to have been properly stored and mixed before presentation. Secondly, the animal’s immune response has to respond to the vaccine to produce protective immunity. Many factors are important in the proper working of the immune response, but two of the most important are trace mineral nutrition and parasitism. So what are some of the weak links in the chain of protecting cattle from disease and what can we do about them?

Can storage conditions affect vaccines?
Definitely! Most vaccines should be stored at 35-45º F. The recommended storage conditions are on the vaccine label. Vaccines should be stored at the recommended temperatures from the time they are manufactured until the time you use them chute side. Overheating vaccines can cause obvious problems, as the proteins in the vaccine will breakdown (denature) and will not produce the desired immune response. Worse than overheating, freezing vaccines will decrease their effectiveness even faster. So the recommended storage condition of 35-45º F is a strict range on both ends. Both modified live vaccines and killed vaccines are affected by improper storage temperatures. Nearly all killed vaccines contain an adjuvant that aids in the immune response, as do some live vaccines. High or low storage temperatures cause these mixtures to separate and lose their effectiveness to prevent disease.

What about refrigerators and their effectiveness?
It turns out that many of the refrigerators we use for storing cattle vaccines and drugs are cast-offs from some other use and may not be functioning properly. A survey by David Thain, DVM, at the University of Nevada, Reno found 25 percent of ranch refrigerators failed to maintain temperatures to keep vaccines in the safe range and most of the failures had to do with freezing the vaccines (temperatures as low as 10º F for extended periods). Many of the old refrigerators we use tend to freeze items stored in the back near the coils, and overheat items stored near the front or in the door because the rubber seals no longer work. Additionally, some of the older refrigerators cannot insulate well enough when placed outside in the winter and the vaccines simply freeze inside the refrigerator.

How can I tell if my refrigerator is working correctly?
You can buy a thermometer which records minimum and maximum temperatures and place it in your refrigerator for several days. Put it in different locations to be sure you don’t have cold spots or hot spots. These thermometers can be purchased for less than $20. They are made in both electronic form and magnetic form (the high/low thermometers we use to record daily temperatures). Simply go on the Internet and type in “recording thermometers” and browse the various offerings until you find one that suits your needs. Leave a thermometer in your storage refrigerator and monitor it from time to time.

Continued...
What affects the immune response of the calves?

Many things will affect the calves’ ability to respond to vaccines or disease challenges. These challenges include, the presence of the BVD virus in the herd, stress, previous vaccination history, the products used, parasites, nutrition, and vaccine handling. The storage of vaccines was discussed above as an important part of vaccine handling. Cattle that are parasitized do not respond normally to vaccines. Also, calves deficient in trace minerals such as selenium (Se) or copper (Cu) respond poorly to vaccines and infectious diseases.

Why do parasites affect the immune system?

Most parasites have complex life cycles and depend on evading the host’s defenses to survive. Part of this evasion is to affect the host’s immune system so there is not a large reaction against the parasites. Therefore, most parasites make chemicals that decrease the animal’s ability to make a full immune response. While this helps the parasite, it harms the host in terms of handling other infections.

How do you minimize the parasites’ damage?

Having a comprehensive parasite control program for the entire herd is the first step. Deworming the cow herd before they enter clean pastures will help keep the parasite load low in the herd and keep the number of parasite eggs on the pastures to a minimum. The use of effective products will also have a positive impact. Your veterinarian can advise you on the use of appropriate products and the timing of use in your herd.

What are the best de-wormers to use?

Again, your veterinarian can best advise you on this topic for your herd’s particular situation. However, I recommend using the brand name products at this time. There have been a number of situations in the recent past where generic ivermectin products have been associated with significant parasitism, i.e., the generic ivermectin were used and clinical problems remained. If you have any indication that a de-wormer did not work, have your veterinarian investigate the problem and analyze fecal samples to determine if patent parasitic infections are present.

How do trace minerals affect the animal’s immune system?

Many trace minerals and vitamins are now referred to as “antioxidants.” As part of their antioxidant function they are very important in the immune system. In California, most of the beef cattle are deficient in either Se or Cu (or often both) unless they are supplemented. These minerals are very important in the calves’ immune system for a normal response to vaccines and to ward off diseases such as pneumonia. Also, neither Se nor Cu are well transferred to the calf via milk, so near weaning, the calves are often at their lowest level in terms of Se and Cu – at greatest risk for deficiency.

How do I know if my calves are deficient?

A few blood samples taken from your calves at or near weaning will tell the story. They can be analyzed for the trace minerals and will reflect how well your supplementation program is working. There are a number of effective ways to supplement Se and Cu and your veterinarian can help you work through the options that will work best for you.

What’s the bottom line?

With regard to handling vaccines, make sure your refrigerator and vaccine storage system is working. Be sure to store your vaccines and other animal health materials according to label instructions. For vaccines this is usually between 35 and 45º F. For parasite control, use brand name products recommended by your veterinarian at an appropriate time to make sure calves to be vaccinated are not heavily parasitized. With regard to trace minerals, have a good supplementation program that includes occasional monitoring of calves’ blood levels to be sure the program is working efficiently. Strengthen these weak links and combine them with good BQA practices and your calves will be healthier with minimal disease problems.

If you are due to recertify in BQA or you need to certify for the first time, contact Stevie Ipsen in the CCA office at: (916) 444-0845 or e-mail at: stevie@calcattlemen.org to find out about an upcoming certification program near you.
Announcing

*Guidelines for Managing Hardwood Rangelands Webinar*

**Field Day**

*Avenales Ranch, Pozo CA, June 30, 2011.*

9:00 am – 2:00 pm

California’s oak woodlands cover 10 percent of the state and are its most biologically diverse broad habitat. Oak Woodlands are also an important location for agricultural and other economic enterprises. With 80 percent in private ownership, continued sustainability of resources is in the hands of private individuals. The goal will be to create an awareness of the importance of managing oak woodlands and to present management alternatives that are economically profitable for landowners to consider. This field trip was designed as the follow up for the webinar series, but anyone is welcome to attend.

Program Outline:

9:00 am – 2:00 pm. Registration and Refreshments start at 9:00 am.

Bring appropriate foot ware and clothing for hot, dry weather. There will be some off trail-overland hiking. The restrooms are rustic forest service camp ground outhouses.

Registration. No Cost – Bring your own lunch, and lots of water. We do need a count so please register by going online at [http://ucanr.org/sites/oak_range/](http://ucanr.org/sites/oak_range/) or call our office at 805-781-5940.

- Introduction to Avenales Ranch - Jim Sinton, Steve Sinton
- Oak Woodland Management Issues - Rick Standiford
- Oak Regeneration, Seeding, Stump Sprouting, etc. - Doug McCreary
- Oak Thinning, Measuring, Management, etc. - Rick Standiford
- Wildlife and Oak Woodlands - Bill Tietje
- Forage Production, Management and Water Quality - Royce Larsen
- Conservation Easements – Steve Sinton, Doug McCreary, Rick Standiford
- Alternative Review Program - Upper Salinas Las Tablas, RCD
- Brief lunch, PLEASE BRING YOUR OWN LUNCH
- Sycamore Regeneration Study – Steve Sinton, Royce Larsen, Bill Tietje

**Directions to Avenales Ranch**

We will meet at the American Canyon Campground. It is approximately 30 miles from the 101 FWY and Santa Margarita Exit. It is a narrow winding road, and takes approximately 1 hour driving time from the 101 FWY. Two wheel drive vehicles can make it, but high clearance is needed, i.e. vehicles such as pickups, SUV's or Crossovers. Carpooling is recommended.

Go through Santa Margarita from the 101 exit (1.5 mi)

Turn Right onto HWY 58/Estrada Ave. (0.2 mi)

Turn Left onto W Pozo Street/HWY 58 Rd (1.3 mi)

After crossing bridge, Stay straight to continue on W Pozo Rd (Note: HWY 58 turns left right after crossing the bridge) (17.2 mi)

Turn Right onto E Pozo Rd. (Note: The road signs are confusing at this intersection. W Pozo Road turns into Parkhill Road. You have to make a right turn to be on E Pozo Road.) (1.7 mi)

Stay straight to go onto San Jose Avenales Road to ranch entrance. (The San Jose Avenales road is paved. The main entrance to the Avenales Ranch is at the large steel gate where the pavement ends. There will be signs showing the way to American Canyon Campground for the remainder of the distance.) (3.1 mi)