A Drought- Again
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Drought is a word that seems to be spoken a lot on the Central Coast, especially during this last decade. This year has been sufficiently difficult here on the Central Coast that on April 10, 2013 the USDA Secretary, Tom Vilsack, designated Monterey and San Luis Obispo Counties as “primary natural disaster areas” due to drought-related agricultural losses.

According to Dick Nock, Nock Trading Company, the Templeton Livestock Market has had over 7,000 head of butcher cows sold this year from the Central Coast. Between 1,200 and 1,500 cull cows are sold annually at TLM in years with “normal” weather. Doubtless cows have also been sold at the 101 Livestock Market in Aromas, or the Western Stockman's Market in Famoso, so the number of extra breeding stock liquidated on the Central Coast may be a lot higher. A lot of these were reported to be young cows or first calf heifers probably culled because they did not breed back, possibly due to poor feed availability. Whether older cows or replacement heifers, clearly many ranches have had to significantly reduce their production capacity for some years ahead. Fortunately the market has been somewhat favorable for selling these cows this spring, it may take several good years for calf production in many Central Coast herds to fully recover. Programs like NAP (The USDA Farm Service Agencies Noninsured Crop Disaster Assistant Program) only covers a small portion of the total losses a rancher may experience, but some is better than none. However, this only applies to those that had enrolled last fall, and there were many ranchers that did not.

We have had lots of bad years on the Central Coast in the past. In 25 of the last 125 years, the Paso Robles Downtown station has recorded less than 10 inches of rainfall in a season. Over that time period the average has been 15.1 inches. The lowest rainfall recorded in...
downtown Paso Robles occurred in 1898, which was 4.8 inches. The most precipitation recorded in Paso Robles was 31.3 inches in 1969, the year of the big flood. Since 1969 there has been a downward trend in precipitation for San Luis Obispo County. This year, Paso Robles received 7.16 inches. Just a few years ago, in 2007, Paso Robles only received 6.24 inches. So what makes this year so much more devastating to the livestock industry compared to other years?

We have been measuring forage production in San Luis Obispo County since 2001. We now have 12 sites that are monitored each year across the county. See Figure 1 for locations and dates they were established. The overall average across these sites since the monitoring began is 3,178 lbs/ac of available feed. Sites near the coast usually have more, and sites in the eastern portion of the county usually have less. The best year so far was the 2005-2006 growing season, with an average of 5,345 lbs/ac of available feed (see Figure 2). This last year was the worst we have measured, with an average of 1,155 lbs/ac available feed (Fig. 2). Available feed is the total amount of production at a site minus the amount that needs to be left for soil protection and good annual grass seed germination and growth for the next season. This meant there was very little feed available for livestock this year. On some sites in the eastern portion of the county there was no available forage produced at all.

In 2007 we had 30% less rainfall, (Fig. 3), but a small amount more available feed (Fig. 2) than this year. Perhaps the best explanation for this is the timing of the rainfall. In 2013 we had the 3rd driest January- to-April rainfall period. “The driest January-to-April on record occurred in 1972, when only 2.8 inches of rain fell. The next driest was 1984, when 3 inches of precipitation was recorded. So far this year, only a meager 3.3 inches of rain has fallen from the sky. Historically, about 14.5 inches of rain is expected” (John Lindsey, Special to the Tribune, April 27, 2013).

We also found this to be true with the sites we monitor. During 2007 the monthly rainfall was better distributed throughout the growing season, see figure 4, than during 2013. This year we had a very wet December which is during the slow growth period for annual grasslands. But then it was dry for the remainder of the spring (fig. 4). It may have also been colder for December and January than a normal year. It appears to be very important for plant growth to have adequate rainfall during the critical rapid growth phase, especially during February through March. In addition, last year was also a low rainfall year meaning the soil started the year in a moisture stress situation. Ranches which may have grazed close to, or beyond, RDM guidelines in last year’s drought may have had fewer grasses germinate and grow this season. That coupled with the second year of drought may have greatly reduced forage yields. It may take several years of lighter use under “normal” precipitation to bring annual grass production back up to normal levels. While these concepts are speculated at this time, we have recently installed rainfall and temperature stations at each of the sites, and we have begun a study to look at these interactions.

There have been worse droughts than the one we are experiencing. The great drought of 1862–1865 wreaked havoc on the state and the cattle industry. Half of the cattle in the state died as a result of this long drought, and large numbers of cattlemen were forced out of business forever changing the way the ranching industry did business in California. Another severe drought that made the news occurred in 1976. We have had droughts similar to 1976 eight times since 1869, or approximately once every 17 years. The current models predicting climate change show that the dry years will be drier and the wet years will be wetter. It is already very difficult to deal with droughts. If the current predictions of climate change do occur, it may make ranching very unpredictable with disastrous consequences during these droughts. The current long term forecast is for another “drier than normal” year for 2013-2014. Let’s hope the forecast changes and we get a much better rainfall year.
Figure 1. Location of the 12 monitoring sites, San Luis Obispo county. Establish date for each site: 2001 = Adelaida, Camatta, Cambria, Carrizo, Huasna, and Morro Bay, 2003 = Shandon, 2004 = Bitterwater and Soda Lake, 2010 = Creston, Pozo and W6-Cal Poly

Figure 2. Available feed from the monitoring sites around San Luis Obispo County, from 2001-13
Figure 3. Rainfall amounts at the monitored sites, 2001 - 2013.

Figure 4. Average monthly distribution of rainfall (2000 – 2013) and monthly distribution for 2006-2007 and 2012-2013 water years, at the monitored sites.
Early Leaf Drop on Central Coast Oaks
Doug McCreary, Natural Resource Specialist Emeritus, UC Berkeley

Because the past rainfall year was exceptionally dry, the leaves of many oak trees on the Central Coast have been turning brown, and some trees have even begun losing their leaves. Two native California oaks, including valley oak (Quercus lobata) and especially blue oak (Q. douglasii), have exhibited these symptoms. Both of these deciduous species lose all of their foliage in the fall, but during summer and early fall they are normally green and leafy. A number of landowners have contacted the San Luis Obispo County Cooperative Extension county office to find out what is causing the problem and whether their trees are in jeopardy.

While early leaf drop is unusual, it has happened many times before during dry years. In the severe drought of the mid-70s and again in the late 80s, some trees lost all of their foliage by mid-August. For this reason, several deciduous native California oaks – especially blue oak are labeled as “drought deciduous”. This simply means that they lose their leaves early in response to extremely dry soil conditions. This is apparently an adaptive mechanism to prevent lethal desiccation by eliminating moisture loss due to transpiration from the leaves that can occur as long as the leaves are green.

The immediate effects of this leaf loss may be startling, but there should be little long-term impact on tree health. During the coming months, trees may continue to lose their leaves, but there is also a strong possibility that many trees will grow new leaves before the fall, especially trees that lost their leaves relatively early in the season.

Because trees with more energy reserves are better able to refoliate than are weakened trees, tree vigor also helps determine the amount of refoliation. Trees with pre-existing stress, or infected trees that lose their foliage relatively late in the season, may not refoliate as fully. They may also experience some dieback in the crown. The leaf loss reduces the tree’s ability to manufacture food through photosynthesis and over time, repeated defoliations could weaken trees. But because these events are often widely spaced, long-term tree health is usually not seriously impacted. Next year, it will probably be difficult to tell which trees lost their leaves early, and which remained foliated late into the season.

Trees reveal stress due to draught conditions.

Leaf drop usually occurs in late fall but due to this year’s draught conditions, the oaks are shedding leaves very early.

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Food Safety and Water Quality Co-Management Forum

Hosted by the Farm, Food Safety, & Conservation Network

August 21, 2013 8:30 am to 4:00 pm
Watsonville Civic Plaza Community Room
275 Main St. 4th floor, Watsonville, CA

The forum will address design and management of practices for nutrients, pesticides and pathogens in the production environment. Morning panels include leading researchers discussing strategies to put current knowledge into action, and representatives from key organizations discussing strategies that support growers in addressing emerging market and regulatory pressures. The afternoon includes visiting a diverse, high-intensity organic vegetable and berry farm adjacent to the Watsonville Sloughs for a series of field stops to: 1) Hear from the land manager, growers and their food safety professionals how they manage for food safety and environmental quality in a potentially challenging setting; 2) Work through site-specific scenarios to address co-management challenges in tandem with food safety, agricultural, conservation and resource management professionals; and 3) Conclude with a large group discussion on fresh observations resulting from the field activity.

To register go to, or click on http://ucanr.edu/foodwaterforum

Announcement from...

COUNTY OF SAN LUIS OBISPO
Department of Agriculture/Weights and Measures

RECENT LABELING CHANGES AFFECT THE USE OF RODENT BAITS

Rodenticides containing anticoagulants, such as, chlorophacinone and diphacinone, are now federally restricted. Supplies of the baits with the older non-restricted labels are no longer available. This means that growers need to become certified as a private applicator before purchasing vertebrate baits, including the P.C.Q. Pelleted Rodent Bait. In addition to becoming certified as a private applicator, growers still need to have a valid Operator Identification Number (OIN) or Restricted Materials Permit (RMP).

FOR MORE INFORMATION CALL YOUR NEAREST AGRICULTURAL COMMISSIONER’S OFFICE TO SCHEDULE AN APPOINTMENT FOR AN OIN OR RMP:

- Templeton: 434-5950
- San Luis Obispo: 781-5910
- Arroyo Grande: 473-7090
Central Coast Famous Faces, Places, and Spaces

Central Coast Summer Critters
Ranching Sustainability Analysis (RSA) WORKSHOP
August 22, 2013: 8:30 am to 3:00 pm
UCCE Auditorium 2156 Sierra Way, San Luis Obispo

Farm Advisors, local ranchers, and experts in the industry will define RSA (where it originated and how it works) and talk about its importance, not only for achieving and maintaining a prosperous ranch, but for preserving family values as well.

Featured Guest Speaker John Lindsey, PG & E Meteorologist will discuss winter rainfall predictions and upcoming weather concerns!

The RSA panel and discussion topics include:
- Steve Sinton: Regulations & Confidentiality
- George Work: People Relationships
- Aaron Lazanoff: Ranch Management
- Chuck Pritchard: Statewide Perspective

Guest Speakers and Activities include:
- Bill Tietje, Natural Resource Specialist-UC Berkeley: Basic RSA
- Kris Beal, Executive Director-Central Coast Vineyard Team: How RSA Benefits Ranchers
- Royce Larsen, Natural Resource Watershed Advisor, UCCE: Management; Science vrs Art
- Aaron Lasanoff, Ranch Owner: Management Examples
- Opportunity to fill out RSA sheets
- Alan Savory Video: Climate Change

On line registration: http://ucanr.edu/rsaworkshopaug2013
Or call 805-781-5940
Cost: $20.00 (Includes Handouts, Continental Breakfast and Lunch!)

For more information on Ranching Sustainability Analysis go to: http://ucanr.edu/rsa
ABOUT RSA

Ranch assessment is conducted by rating a total of 11 ranch management categories. A confidential data base tracks needs and progress. Other categories not shown include soil, regulations and regulators, people, economics, energy, monitoring, and pest management.

Ranch Management Categories

Livestock Less supplement use, higher weight gains, improved conception rates

Forage Improves range quality

Water Reduces stream bank erosion, improves water quality, increases wildlife grazing

Mission
To create and implement a voluntary self-assessment program that ensures the sustainability of production, lands, and families for California Ranchers.

Wildlife Conservation
Diversifies income through hunting and trail rides, increases positive public relations