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What's Your Drought Plan?

For many of us in the Sierra foothills and Sacramento Valley, December 2017 felt eerily similar to the winter of 2013-2014 (when we went nearly 60 days without rain). Here in Auburn, we measured just 0.88" of rain for the month, making it the third driest December in the 16 years I've kept records. While the 7+ inches we measured in November was enough to start and sustain our annual grasses, warmer-than-normal temperatures and lack of rain last month has depleted the moisture in the top 6 inches of our soil. As I drove south through the foothills during the holidays, conditions were even drier. We desperately need the storm door to open and rain to return to California!

As the 2012-2015 drought emphasized for me, a written and dynamic drought plan is critical for any rangeland livestock operation (regardless of scale). A written plan helps remove (or at least reduce) the emotional response all of us have to stressful situations. A written drought plan can help lay out an objective course of action that protects rangeland and forage resources, maintains herd or flock genetics, and minimizes economic impacts.

In our own sheep operation, we began discussing our drought plans as December's prolonged dry spell progressed. I found that talking through our strategies was as important as the strategies themselves; more brain power, in this case, led to better solutions. As we discussed our options, we included information about forage production, economics and our production calendar – all of which helped refine and focus our plans. Our plan is a work in progress, but it does provide some parameters for making decisions going forward. We've tried to make it concise and objective. Our strategies are divided into proactive (or preparatory) steps and reactive (or response) steps. We've also incorporated critical dates by which we'll make specific decisions depending on conditions.

As we went through this planning process, I realized how important our record-keeping system is. In addition to tracking our financial and economic performance, we've long tracked a variety of production and climate data. For example, I've tracked daily temperature and precipitation data since we moved to Auburn 17 years ago. While every year is different, this information does help us predict the likelihood of certain conditions in the future (for example, in 5 out of the last 15 Januarys, we've received less than 2 inches of rain). By contrast, the warmer- and wetter-than-normal autumn in 2016 resulted in bigger lambs and more birthing problems in 2017.

Similarly, we have a firm grasp on specific costs and production measures. For example, feeding supplemental protein to help the ewes digest dry forage costs us about \$3/head/month. Knowing this, we can make a rational decision about whether to provide supplemental feed to carry us through abnormally dry months. We also know our typical conception rates, ewe lamb retention rates, and forage consumption by week and paddock, which allows us to forecast forage demand on a monthly or even weekly basis. On the supply side of the forage equation, experience allows us to estimate standing forage (which we can compare with actual measurements taken at the UC Sierra Foothill Research and Extension Center in Browns Valley – see <http://sfrec.ucanr.edu/Data/WeatherForage/> for more information).

Finally, I should note the importance of conversation and collaboration in our planning process. I find it very helpful to be able to bounce ideas back and forth and talk through specific management actions. Talk with your spouse, your business partner, or your employees – more perspectives make for a more objective plan, in my experience. And don't simply write a plan and stick in a file – this should be a dynamic and ongoing process. The critical dates we've set in our plan suggest a time when we need to meet to discuss conditions and actions going forward – whether we implement a specific strategy or not, these conversations are critical!

See our plan on the next page.

As someone once told me, the time to plan for drought is when it's raining. I'm hopeful that we'll see a change in our weather pattern as we start the New Year – several inches of rain in the first half of January would do wonders for our late winter and spring forage growth. If you're interested in developing your own drought plan, contact me at dmacon@ucanr.edu or call (530) 889-7385 to schedule an appointment! Also, be sure to check out the rangeland drought information hub at <http://rangelands.ucdavis.edu/drought/> - tons of helpful information on current conditions, drought planning, and forecasting.



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Flying Mule Farm Drought Plan – 2018

Introduction

The purpose of this drought management plan is to document the proactive strategies that Flying Mule Farm will utilize to prepare for drought. These preparation strategies will be utilized regardless of forage conditions and precipitation. This plan also outlines the reactive strategies that we'll utilize when drought occurs. Specific conditions and critical dates are a key component of these reactive strategies. By outlining specific actions, we hope to make more objective decisions regarding drought responses.

Preparation Strategies

1. Utilize conservative stocking rate on annual rangeland (3-5 acres per ewe per year).
2. Management calendar – match peak forage demand with peak forage growth.
3. Grazing planning – meet monthly to plan grazing activities. Develop/review 3-, 8-, and 12-month plans.
4. Record-keeping
 - a. Track the most productive ewes (# of lambs born, lbs weaned).
 - b. Track conception rate
 - c. Track forage production (stock days) by pasture/property
5. Stockpile forage and rest pastures based on recovery rates.
6. Track SFREC forage production and long-range weather forecasts (Weather West).
7. Invest in portable fencing and stock-water equipment.
8. Investigate additional grazing lease and targeted grazing opportunities as they arise.

Response Strategies and Critical Dates

Strategy	Action	Critical Date Condition(s)
Evaluate forage supply and reduce forage demand if necessary	Mouth and bag ewes; sell broken mouths and/or hard bags	June 1 SFREC peak standing crop <50%
Evaluate forage supply and reduce forage demand if necessary	Mouth and bag ewes; sell broken mouths and/or hard bags	September 1 (pre-flushing) Quantify fall forage supply
Reduce forage demand	Sell broken mouths and/or hard bags (if any were kept)	December 1 No germination
Supplemental feeding	Provide supplemental protein to bred ewes	December 1 No germination
Additional labor	Plan for additional labor needs (moving sheep) during lambing	February 1 SFREC January forage production <50%
Reduce forage demand	Early wean lambs at shearing	May 10 SFREC April forage production <25%
Reduce irrigated forage demand	Early wean lambs and sell feeders	June 1 Curtailed of irrigation water <25%
Reduce irrigated forage demand	Sell replacement ewe lambs and feeder lambs	July 1 Curtailed of irrigation water <50%

Culling Criteria

Note: These criteria describe the priorities for culling ewes in the event of drought. Some criteria (1 and 2, for example) are applied every year regardless of forage conditions. Others (like culling for teeth or udder problems) may be applied progressively (that is, an extremely productive ewe in good body condition may be kept initially even if she's missing teeth).

1. Poor mothering ability (per EZ-care records)
2. Behavior problems (mostly lack of respect for electric fence)
3. Broken mouths and/or hard bags
4. Open for 2 consecutive years
5. Ewes > 8 years of age
6. Lower productivity ewes (typically have single lambs)
7. Replacement ewe lambs

New Antibiotic Requirements for Livestock Producers – Are You Ready?

(Reprinted from the *Ranching in the Sierra Foothills* blog: <http://ucanr.edu/blogs/ranchinginthefoothills>)

Antibiotics used to prevent and treat animal diseases are an important tool for livestock producers and veterinarians. As in human medicine, antibiotic resistance threatens the efficacy of these tools. As you may have heard, a new law took effect in California this year; as of January 1, 2018, all medically important antibiotics must be administered with a prescription or veterinary feed directive (VFD) issued by a licensed veterinarian through a valid veterinarian-client-patient relationship (VCPR). The new law applies to commercial producers and hobbyists alike. The goal of the new law is to ensure current and future availability of antibiotics.

What does all of this mean for producers? First, it means that you'll need to be sure you are working closely with your veterinarian. For a valid VCPR, your veterinarian needs to know and see your operation. According to the VCPR regulation, "The veterinarian [must have] sufficient knowledge of the animal(s) to initiate at least a general or preliminary diagnosis of the medical condition of the animal(s). This means that the veterinarian is personally acquainted with the care of the animal(s) by virtue of an examination of the animal or by medically appropriate and timely visits to the premises where the animals are kept."

In anticipation of the new law, you may want to consider having your vet out to your operation to update this relationship. At that point, he or she may be able write you a prescription (or a VFD) for specific products (like LA-200, for example) to treat a specific range of conditions. Your veterinarian needs to know that you know how to identify particular illnesses (like respiratory infection) and safely administer the antibiotic according to label and prescription instructions.

Second, you should check in with your feed store or other pharmaceutical supplier to make sure they'll still offer the antibiotics you've been using. In order to sell pharmaceutical products that require a prescription, a feed store will need to be a licensed veterinary food-animal drug retailer. Some suppliers have indicated that they are uncertain about the new requirements; you can point them towards the resources in the links below.

Third, take some time to educate yourself about antibiotic stewardship. As livestock producers, all of us have a responsibility to ensure that these products remain effective and available. Make a habit of reading

label instructions and documenting your use of these products – this is simply sound management (regardless of the legal requirement).

Finally, this new law doesn't affect vaccines – you'll still have access to the over-the-counter vaccines you've been using. Once again, you should consult with your veterinarian; vaccination programs may become all the more important in this new regulatory environment.

Here are some links for more information (including a list of medically important antibiotics that now require a prescription):



- CDFA Antimicrobial Use and Stewardship website: <https://www.cdfa.ca.gov/ahfss/AUS/>
- US and CA Antibiotic Laws (flowchart): https://www.cdfa.ca.gov/ahfss/AUS/docs/AUS_Flowchart.pdf
- Drug List – Prescription Required in CA: https://www.cdfa.ca.gov/ahfss/AUS/docs/CA_MIAD_List.pdf
- Find a Veterinary Food-Animal Drug Retailer:
[http://www2.dca.ca.gov/pls/wllpub/wllqryna\\$lcev2.startup?p_qte_code=VET&p_qte_pgm_code=7200](http://www2.dca.ca.gov/pls/wllpub/wllqryna$lcev2.startup?p_qte_code=VET&p_qte_pgm_code=7200)
- Beef Quality Assurance – Antibiotic Stewardship:
https://www.bqa.org/Media/BQA/Docs/bqa_antibiotics_final.pdf
- American Sheep Industry – Antibiotic Information:
http://www.sheepusa.org/ResearchEducation_AnimalHealth_Antibiotics



Workshops for Sheep Producers

If you're currently in the sheep business, or interested in getting started, there are a number of UCCE and sheep industry workshops scheduled in the coming months!

- **Improving Lamb Marketing, Quality and Profitability: Options for California Producers:** sponsored by the California Wool Growers Association, these 1-day workshops will provide information on sheep genetics, accelerated lambing systems, nutrition and feed management systems, and flock management tools.
 - January 15 – Etchamendy Sheep Company, Bakersfield, CA
 - January 16 – Emigh Livestock, Rio Vista, CA
 - January 17 – Chico State University Sheep Unit, Chico, CA
 - January 18 – UC Hopland Research and Extension Center, Hopland, CA



To register, go to <http://cawoolgrowers.org/events/CWGA%20Jan%202018%20Workshop%20Flyer.pdf>

- **Sheep Management Basics (January 18, 2018 – 6:30-8:30 p.m. – Auburn, CA):** This evening workshop will include presentations and discussion on general sheep husbandry, production calendars, general nutrition, reproductive management, and economic analysis. Presented by UCCE-Placer/Nevada/Sutter/Yuba. Cost: \$5/person. Register at <http://ucanr.edu/sheepmgmtbasics2018>.
- **Preparing Ewes for Lambing (January 20, 2018 – 8:30 a.m. – 12:30 p.m. – Auburn, CA):** This hands-on field workshop will include information on vaccination programs, ewe management (including ultrasound pregnancy detection), ewe nutrition and other general husbandry topics. Participants will learn how to give injections, trim feet, and handle sheep. Rain or shine! Presented by UCCE-Placer/Nevada/Sutter/Yuba \$5/person. Register at <http://ucanr.edu/preparingewesforlambing2018>.
- **Pasture Lambing School (March 3, 2018 – 8:30 a.m. – 12:30 p.m. – Auburn, CA):** This hands-on field workshop will cover pasture lambing management, including ewe and lamb nutrition, lambing problems, record-keeping, and predator protection. Come prepared to handle and process new lambs! Rain or shine! Presented by UCCE-Placer/Nevada/Sutter/Yuba \$5/person. Register at <http://ucanr.edu/pasturelambingschool2018>.

Additional Shepherd Skills Workshops on wool handling and grazing management will be offered in the spring, summer and fall of 2018. Stay tuned!

Farm and Ranch Business Planning Short Course

Have you operated a farm or ranch business for at least a year? Would you like to get a better handle on the economics of your operation? Would you like to learn how to plan for profit rather than scrape by on whatever is left in the checking account at the end of the year?

If you've answered "yes" to these questions, consider applying for the 2018 Farm and Ranch Business Planning Short Course offered by UCCE-Placer/Nevada. This 6-week course will provide in-depth information on farm economics, cash flow management, operations planning and continuity, risk management, and marketing strategies. Taught by UCCE advisors Cindy Fake and Dan Macon, as well as experienced farmers and ranchers, the course is limited to 8 farm/ranch businesses. This is an outstanding opportunity to help take your farm or ranch business to the next level! \$50/operation (up to 3 people from your operation can attend). Thursday nights (6-9 p.m.) from January 25 through March 1, plus Saturday, February 3 (10 a.m. – 4 p.m.). To apply, go to <http://ucanr.edu/sites/placernevadasmallfarms/?calitem=390740&g=22527>.



Placer-Nevada-South Sutter-North Sacramento Subwatershed Group Annual Meeting

The annual membership meeting for the Placer-Nevada-South Sutter-North Sacramento (PNSSNS) Subwatershed Group will be held on **February 21, 2018, at 10 a.m. at the Western Placer Waste Facility** (3033 Fiddymont Road, Roseville). As you may know, the PNSSNS board of directors is contemplating significant changes in its relationship with the Sacramento Valley Water Quality Coalition in 2018. These changes may have implications for member dues and representation – it's critical that grower-members attend this meeting!

Also, Whole Farm Evaluations are required for 2018. These forms were previously emailed to all PNSSNS members – please contact the PNSSNS office at pnsnssubwatershed@gmail.com or (916) 645-1774 if you have not received a form. If you need assistance completing the form for your irrigated pasture operation, please contact me at dmacon@ucanr.edu or (530) 889-7385.



Finally, if you are in the High Vulnerability Areas for Nitrogen, you'll also need to complete a nitrogen budget. UC Rangelands has developed a simple web-based application to help you quantify the nitrogen applied to and removed from irrigated pasture – go to <http://rangelands.ucdavis.edu/ipnmp/>. Once again, I can provide assistance in using this application.