

LIVESTOCK AND RANGE NEWS

SERVING VENTURA AND SANTA BARBARA COUNTIES

Consider weaning early if drought conditions persist

The rains have not come this winter. At the time of writing, seasonal rainfall in Ventura County has been measured at 1.21 inches (Santa Paula) and in Santa Barbara County at 2.50 inches (Santa Ynez). The California forecasts I am seeing are calling for showers in the first part of March, possibly reaching down into Ventura and Santa Barbara Counties, but April is projected to be drier and warmer than usual. None of this is especially good news for rangeland forage production this spring, nor for rangeland-dependent livestock operations.

If these dry conditions persist, you might consider early weaning as a strategy to cope with the lack of available feed. No doubt, your decision of when to wean will be influenced by a combination of things: the market price of calves, the amount of feed in your pastures come spring and summer, and the body condition of your cow herd. With that said, if feed quality or quantity in your pastures becomes low, leaving a calf on its mother when her milk production has declined is of little benefit to calf or mother. The result is a relatively light-weight calf for its age and a mother cow with low body fat reserves going into late summer.

Consider the following two diagrams. Figure 1 shows the Total Digestible Nutrients (TDN), or energy, that a cow-calf pair requires each day over the course of the year. On the vertical axis is pounds of TDN per day. Months of the year is on the horizontal axis. If your herd is fall calving, the “calf born” arrow (between months two and three) occurs sometime around August-December. By Month 5 on the diagram (2-3 months after calving), your mother cow is lactating most heavily and her TDN requirements (densely dotted bar) peak at around 15 lbs TDN/day, right around the time she is bred. In your fall calving system, this would be around November-February, when the available feed resources on rangelands can sometimes be at its lowest. Combined TDN requirements of cow and calf are highest from this time until weaning, peaking between Months 9 and 10 in the diagram, or late spring/early summer in the fall calving herd.

Figure 2 shows how weaning a calf early can benefit both the mother cow and the range resource. Weaning at 4.5 months (say March 1) rather than 7 months (May 15) reduces the herd’s overall demand for forage by removing the

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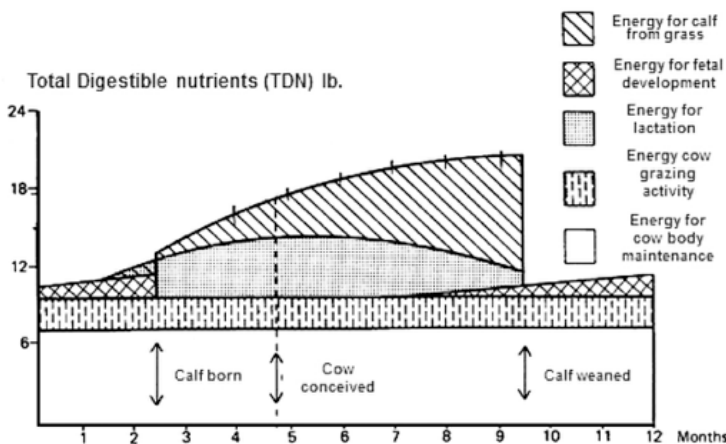


Figure 1.

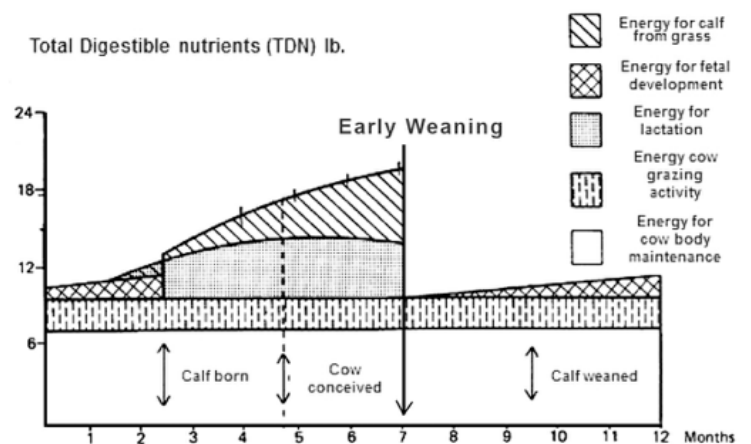


Figure 2.

nutritional requirements each cow has for lactation. Furthermore, selling those light calves March 1 rather than May 15 can remove their added grazing pressure on your pastures (diagonal lines, bar on the top). A March 1 sale might also benefit from a higher price per pound on calves than you'd fetch come May 15.

The research that has been done in recent decades has reinforced that early weaning can be used as an effective strategy to mitigate drought. Research supports a couple of critical things:

- **Early-weaned cows maintain higher body weights (BW) and body condition scores (BCS) compared to normal-weaned cows.** One study found that the cost of supplementing the normal-weaned cows to get them back up to the same body condition score of early-weaned cattle could cost as much as \$100/cow.
- **Weaning early can substantially extend the grazing season for the mother cow herd.** A study out of Wyoming suggests that dry cows grazed 72% less than cow-calf pairs.
- **Early-weaned cows breed back much sooner than do normal-weaned cows,** which can help ensure a regular calf crop every 365-day interval.
- **Early weaning can reduce the need to cull older cows in your herd**
- If you retain your light calves and creep feed them, **there is no difference in body weight between early-weaned calves fed on creep feed and normal-weaned calves.** Directly feeding early-weaned calves is more efficient economically than supplementing their mothers to support continued lactation.

Much of the research work that has been done on early weaning has happened in either the Midwest or Intermountain West and on spring calving herds. There is currently a proposal, however, for a three-year study of the fall-calving herd at the University of California's 6,000-acre working ranch, the Sierra Foothill Research and Extension Center. The study will compare an early weaning group (March 1) and a traditional weaning group (June 1) and will look at cow and calf BW, cow BCS, forage utilization, forage quality, and the economic implications of each approach.

Prices for light weight calves are currently up, which is encouraging should you choose to wean early; but ultimately, the decision of when to wean needs to fit into the other constraints of your ranch and will require balancing your feed resources and current market economics.

Forage futures: What can we expect this year?

by **Rebecca Ozeran**, *Livestock and Natural Resources advisor for Fresno and Madera Counties*

Forage production is tough to predict, especially without good long-term data to show the possible maximum and minimum. Consider this: you purchased a new parcel of grazing land from an owner with no grazing or production records, in a different part of the state, where different forage species grow. With all of those changes, it would be a challenge to figure out how many animals it could feed in an average year, let alone that first year that you owned the land.

This is one of the biggest reasons why we like to measure forage production—to get a better idea of the land's potential and to better manage grazing over time.



Cages such as the one pictured here are one way to exclude grazing from small areas. We can then measure total forage production at the peak of the growing season.

When we measure forage production, we often measure **peak standing crop**: the total amount of forage when it reaches its maximum growth, right around the end of the spring rainy season. Peak standing crop represents the total forage that would be available if the area were not grazed, which has advantages and disadvantages. For example, this method doesn't account for the possibility of forage regrowth after grazing. One major advantage, however, is that it means we only need to measure once a year to have useful information.

Thanks to a long history of partnerships between UCCE, the US Forest Service, and the NRCS, we have forage production records going back to 1936 at the San Joaquin Experimental Range (SJER), a research ranch in the foothills of the Sierra Nevada near Coarsegold in Madera County.

What has production been like in years similar to this one?

Obviously, no two years will provide us with the exact same timing and amount of rain. However, we can look back at historical rainfall and forage production records to see how they compare.

Generally, years of high rainfall are associated with adequate to high production, and years of low rainfall are associated with low production. However, you can see variation in the amount of forage produced even when multiple years had similar total rainfall (see Figure 1 below). The biggest causes of this variability include the timing of rainfall - fall versus spring rain, for instance - and the temperatures of the growing season.

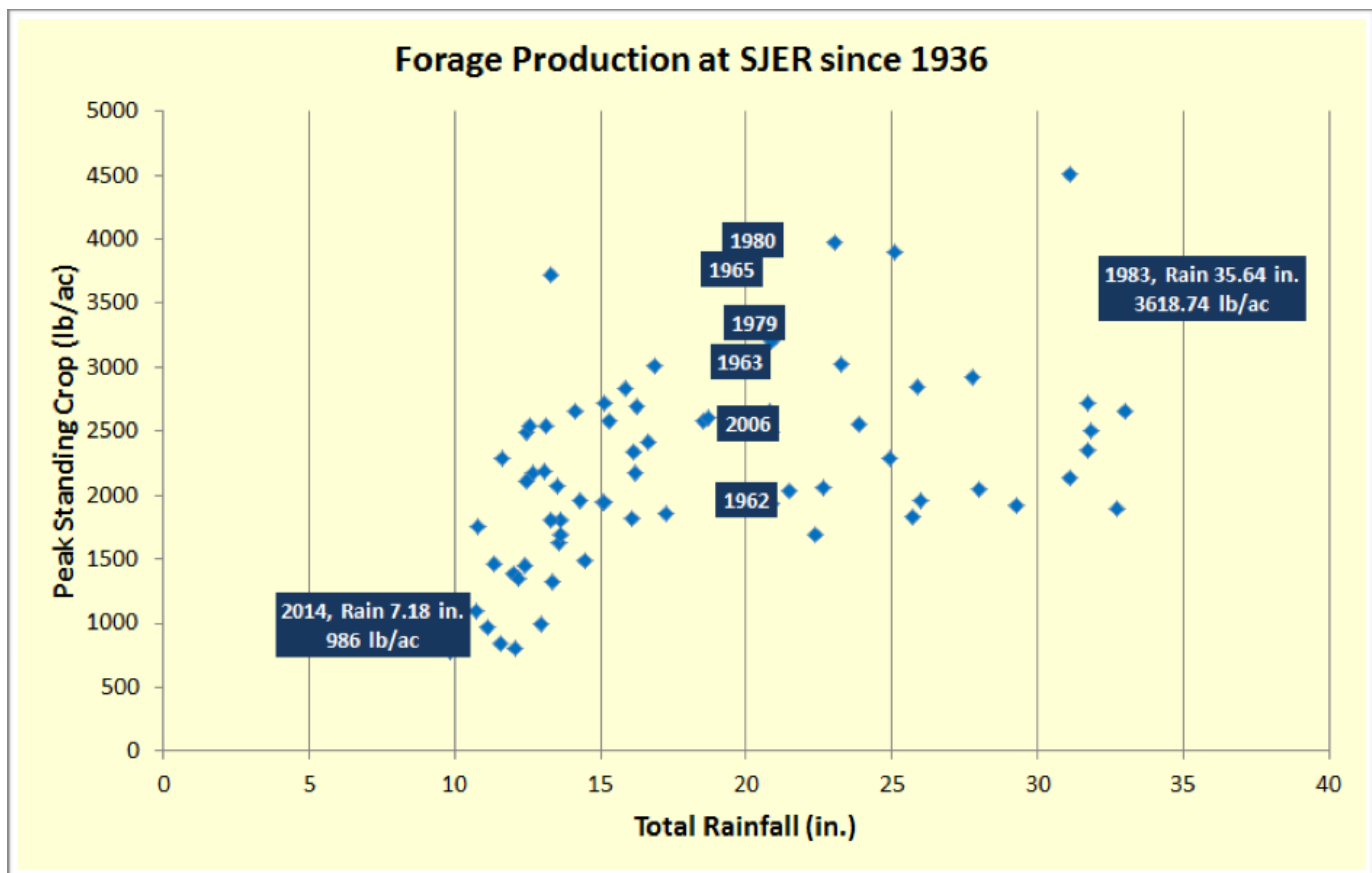


Figure 1. Forage Production at the San Joaquin Experimental Range (SJER) from 1936-2017. Rainfall in 2014 was the lowest recorded in this time frame, but 2014 did not have the lowest forage production. Similarly, the highest rainfall year (1983) did not have the highest forage production. Selected years have been labeled to show how total rainfall is only one factor of forage production each year. For example, with 20 in. of rain, forage production was as low as 2000 lb/ac (in 1962) and as high as 4000 lb/ac (in 1980).

UC Publication 8018 (download here: <http://anrcatalog.ucanr.edu/pdf/8018.pdf>), describes forage production patterns in years with different temperature and precipitation patterns in fall, winter, and spring. Colder temperatures slow down plant growth. Winter growth is usually slower than fall due to both lower temperatures and fewer hours of light each day. In contrast, our relatively warm winter temperatures this February would encourage more rapid growth, if we had the rainfall to support it.

Unfortunately, our weather pattern this year looks a lot like the pattern seen in 2014. In 2014 the total precipitation received by the end of the growing season was very low. At the San Joaquin Experimental Range, for instance, total precipitation was only about 7 inches, the lowest in the 80-year recorded history on the property. Total forage production was less than 1000 lb per acre as a result. This year, as of the end of January, SJER has received around 4 inches, and February has been unusually dry.

Without good spring rain, we are headed for a low-production year. Using the historical data from SJER, I predicted forage production for three total rainfall scenarios. Keep in mind, your property may have differences based on elevation and prevailing weather patterns in your area. This prediction model is best for the Sierra Nevada foothills on the eastern sides of Madera and Fresno Counties, around 1000-1500 ft elevation. Predicted standing crop is shown in the table below, plus or minus one standard error.

Weather Pattern	Potential Total Growing-Season Rainfall (in.)	Predicted Peak Standing Crop (lb/ac)
Dry winter, dry spring	7	1053 ± 206
Dry winter, average spring	15	2076 ± 82
Dry winter, wet spring	21	2527 ± 91

If we have a year like 2014, we can expect similarly low forage production. However, if we get some good spring rain, we may get almost double the forage despite the concerning lack of rain to date. Interestingly, even with a very wet spring (averaging 7 inches of rain in each of March and April), we won't see much more forage than from an average spring. Either way, it is clear that a decent spring would provide slightly below average production, while a dry spring will limit production significantly.

Finally, an issue related to forage production in dry years is that some weedy or poisonous species excel relative to desirable forages. Weeds like tumbleweed, yellow starthistle, horseweed, and tarweed fiddleneck are often more abundant when rain is limited. Hungry animals may be more likely to eat them because preferred grasses like soft chess are often less abundant in dry years. In large quantities, fiddleneck can be poisonous to horses and cattle, and yellow starthistle can be poisonous to horses, so you may want to restrict these animals' access to areas where either of these weeds is the dominant available plant. Goats and sheep are not as vulnerable to fiddleneck and both will enjoy munching on starthistle while it's in the vegetative stage.

Good livestock and grazing management is a key component of drought management. Although you want to ensure your animals have enough feed and water, if you over-utilize pastures during drought they will take longer to recover and might be more vulnerable to soil erosion, weed infestations, and future drought years.

Additional Resources

UC Publication 8034 (download here: <http://anrcatalog.ucdavis.edu/pdf/8034.pdf>) advises drought livestock management practices, including moving livestock to the most productive pastures you have – such as pastures with oaks, if available, which will support more forage under their canopies – and making sure there is abundant fresh water available for livestock.

Stephanie Larson, UCCE Livestock & Range Management Advisor for Sonoma and Marin Counties, has also compiled several strategies for managing livestock during drought. You can read her drought strategies at http://cesonoma.ucanr.edu/Livestock_and_Range_Management/Drought_Management/.

Beef cattle market relationships

by **Larry Forero**, *Livestock Farm advisor serving Shasta and Trinity Counties and*
Jim Oltjen, *UC Davis Animal Science Specialist*

The UC Davis Animal Science Department, UC Cooperative Extension, and California Beef Cattle Improvement Association continue to support an educational program to help improve California beef cattle producers' understanding of feeding performance and carcass attributes of their cattle. It is called the Ranch to Rail program. Producers sell their cattle to the university, who then feeds and harvests them, and report the feeding and carcass data back to the producer. This data also provides the opportunity to look at the relationship between yearlings off grass and finished cattle.

There is an old adage in the cattle business that goes along the lines of “*you make money when you buy the cattle, not when you sell them.*” Purchasing these cattle from producers, feeding them and then selling them 120 days (or more) later has illustrated this point. The first set of steers weighing 897 lbs was purchased for \$2.16/lb. on 10/17/2014. That was ahead of the market collapse beginning in 2015. That set of cattle sold on 3/22/15 for \$1.50/lbs weighing 1325 lbs resulting in an over \$300/head loss. While many factors influence the profitability of feeding cattle (freight, feed cost, sickness, death loss, etc), the biggest factor influencing the profitability of the steers fed through this program has been the cattle market. Figure 1 shows the relationship between the per pound purchase price and the

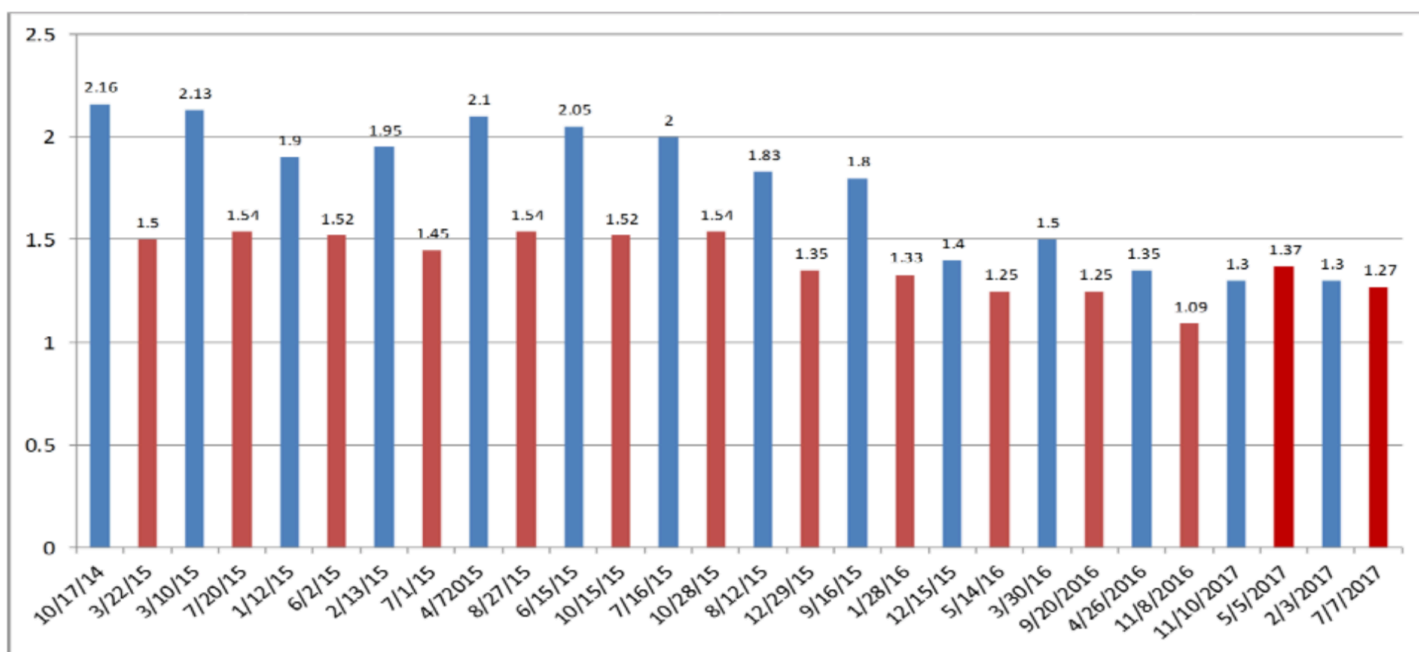


Figure 1. Ranch to Rail Buy/Sell Data in date order

per pound sale price. Note that from 10/17/15 purchase through 1/28/16 sale, the price per pound difference between purchase and sale was significant.

Profitability on these ranch to rail steers is calculated by subtracting gross sale receipts from cash costs. Only cash costs are considered (feeder cattle, feed costs, vaccine and freight) labor, equipment and capital costs excluded. To illustrate this, the relative stable feed costs on a per pound basis are outlined in Table 1.

Table 1. Cost of per lb gain by group fed in date order

A	B	C	D	E	F	G	H	I	J	K	L	M	N
\$0.76	\$0.64	\$0.66	\$0.62	\$0.69	\$0.73	\$0.64	\$0.65	\$0.76	\$0.76	\$0.73	\$0.78	\$0.93	\$0.80

Figure 2 looks at the return over cash costs. Feed prices moved up in the last six months making the last two sets of cattle some of the more expensive cattle to feed, however, Figure 2 notes that both sets of cattle made money. These two profitable lots illustrate the significant effect the market has on feedlot profitability.

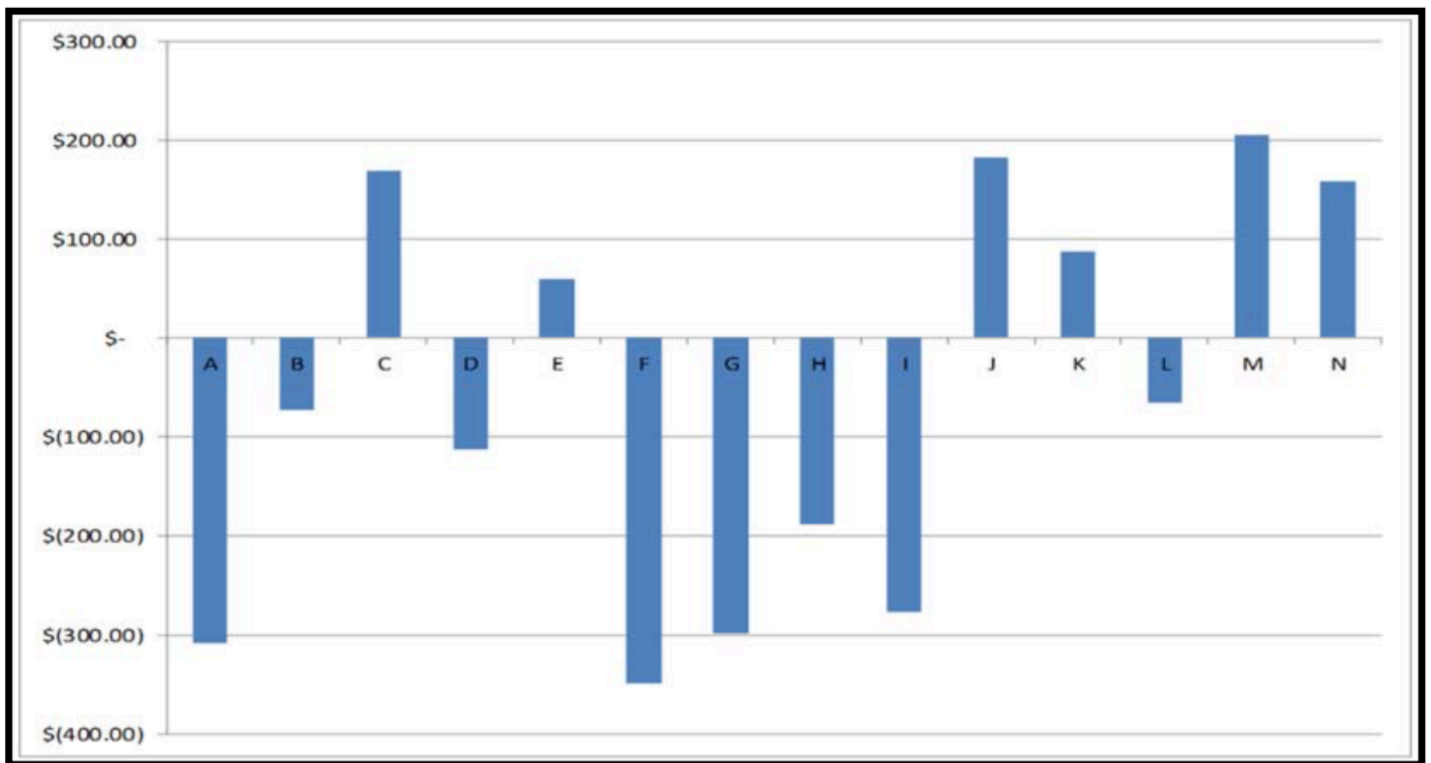
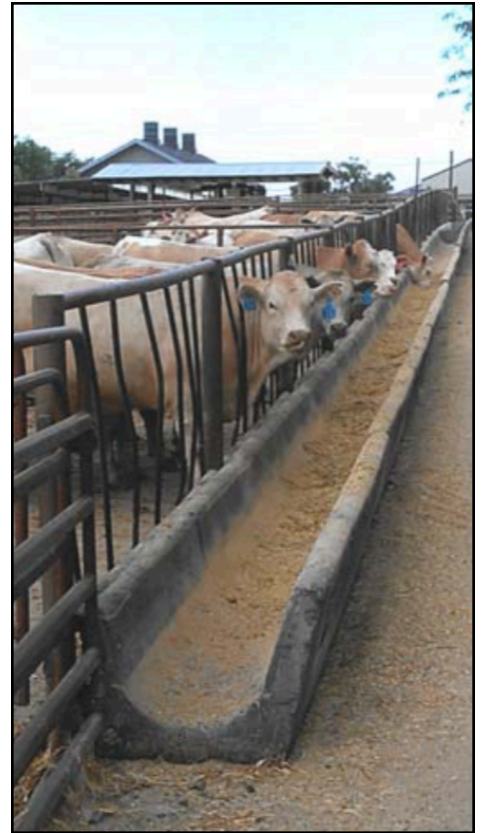


Figure 2. Return over cash costs in order of sell date

While UC is only in the market for small lots of cattle occasionally, this example demonstrates the drastic influence changing market conditions can have on both yearling and feedlot operators. Of the small numbers of cattle purchased by UC, four of the five sets of cattle purchased since December 2016 have generated return over cash costs. The market, while lower, has been less volatile during this period than 2014 and 2015. There is no doubt many factors influence the beef cattle market (beef consumption, exports, competitive products, etc) it sometimes feels that cow-calf producers can't exert a lot of influence over the beef market. Here are some things grass based operators can think about:

- Run scenarios through a spreadsheet - <https://coststudies.ucdavis.edu>
Cost savings should always be considered.
- Semen test bulls—Weaning a calf from a dry cow is tough.
- Consider pregnancy testing cows- It doesn't cost much more to run a bred cow than an open cow.
- Consider fertilizing your pastures- Urea is a little cheaper than a year ago and \$30 cheaper than two years ago.
- Price feeds that you haven't considered feeding for years - commodity prices can change every year making new types of feeds feasible.
- Talk to the marketing reps to gain information as they are in the business every day.
- Watch the trends — seasonal trends can be important to pay attention to. How does your marketing window line up?
- Is anything paying a premium (natural, age and source, third party certified, etc.)?
- Quality and reputation matter.



***Note: The Ranch to Rail program is still open and available for producers to participate. If you are interested, please contact Matthew to receive more information. To participate, you will need to deliver 10-15 700-900lb. steers to the UC Davis feedlot on a pre-determined date. Cattle are sold to the feedlot upon receipt. Producers will receive the average mid-price for the weight class of cattle sold that week around the state. After the trial, each producer will receive performance and carcass data associated with their cattle, which will include average daily gain, feed intake (per pen basis), cost of gain, and carcass data. The idea here is to allow producers to think about improving their genetics for feedlot production and maybe use that as a marketing point.**

Medically-important antibiotics update

I hope by now you've received some word about how California is changing its regulations regarding "medically-important" antibiotics. "Medically-important" means medications that are used therapeutically for livestock but that are also important for use in human medicine. As of January 1st, 2018, a prescription from a California licensed veterinarian will be required for the purchase of all medically important antibiotics. These include antibiotics for which a prescription was always required (Excede, Nuflor, Draxxin, etc.), plus a few others, like penicillin (PPG) and oxytetracycline (LA-200, -300, Biomycin, etc.) that previously could be purchased over the counter.

An important piece to making sure you can access these antibiotics is for you to establish a valid "veterinarian-client-patient relationship," or VCPR. This is another way of saying that you need to develop a working relationship with a local veterinarian before that veterinarian can begin writing prescriptions for you. In some instances this may be as simple as having your vet visit your property every 6-12 months to inspect your animals and review your

production methods. I would encourage you to reach out to your vet *now*, especially if you haven't seen him or her in some time, *before* you run into an emergency situation where you might need access to one of these antibiotics that you previously were accustomed to buying over the counter.

Some details on veterinarian prescriptions from California Department of Food and Agriculture's website:

- If a veterinarian decides that the appropriate use of a medically important antibiotic is necessary to treat, control, or in some cases prevent disease: before dispensing the drug, the veterinarian must offer the client a written prescription that the client may choose to have filled by any licensed facility or with their veterinarian.
- Veterinarians must notify the client in writing that they have a choice to obtain either the medication or a written prescription, and that they shall not be charged for the written prescription (16 CCR § 2032.2(c)). This may be posted in their place of business.

Current options for filling prescriptions:

1. **Your veterinarian:** veterinarians may dispense medically important antibiotics to their patients within a valid VCPR, but they cannot fill prescriptions from veterinarians outside of their practice, except under limited circumstances. Your veterinarian may also be able to suggest other options for filling a prescription in your area.
2. **Veterinary Food Animal Drug Retailer (VFADRs):** licensed by the California Board of Pharmacy, can fill prescriptions for pick-up or delivery. A list of VFADRs follows; however, the closest facility to us looks to be in Paso Robles.

Name	Address	City	County
ANIMAL HEALTH INTERNATIONAL INC	1115 METZGER STREET	RED BLUFF	TEHAMA
ANIMAL HEALTH INTERNATIONAL INC	1906 EAST CEDAR	ONTARIO	SAN BERNARDINO
ANIMAL HEALTH INTERNATIONAL INC	1908 ROCKEFELLER DR	CERES	STANISLAUS
ANIMAL HEALTH INTERNATIONAL INC	830 ENOS LANE	BAKERSFIELD	KERN
ANIMAL HEALTH INTERNATIONAL INC	8711 WEST DOE AVE	VISALIA	TULARE
CHINO VALLEY VETERINARY EXPRESS	14058 EUCLID AVE	CHINO	SAN BERNARDINO
CONLIN SUPPLY CO INC	520 WARNERVILLE RD	OAKDALE	STANISLAUS
CSR SUMMITT INC	288 BUSINESS PARKWAY	ATWATER	MERCED
KINGS DAIRY SUPPLY INC	5835 13TH AVE	HANFORD	KINGS
MWI ANIMAL HEALTH	8900 W HURLEY AVENUE SUITE 101	VISALIA	TULARE
SANEI CORPORATION	1849 SAWTELLE BLVD 545	LOS ANGELES	LOS ANGELES
SANTA CRUZ BIOTECHNOLOGY INC	3600 DRY CREEK RD STE M-3	PASO ROBLES	SAN LUIS OBISPO
SHASTA FARM & EQUIPMENT INC	3748 MAIN ST	COTTONWOOD	SHASTA
TERCO SUPPLY	12725 ROSS AVE	CHINO	SAN BERNARDINO
VETERINARIAN'S CO-OP	1250 CLOUGH RD	ESCALON	SAN JOAQUIN
VETERINARY PHARMACEUTICALS, INC.	13127 13TH ROAD WEST	HANFORD	KINGS
VETERINARY SERVICE INC.	1607 NORTH PLAZA DRIVE	VISALIA	TULARE
VETERINARY SERVICE INC.	4100 BANGS AVE	MODESTO	STANISLAUS
VETERINARY SERVICE INC.	1731 W 16TH STREET	MERCED	MERCED

3. **Licensed Online Pharmacies:** Several veterinary internet pharmacies are registered with the California Board of Pharmacy to fill prescriptions in the state. Buying from legitimate sources ensures the quality is backed by the FDA and your payment details are secured from fraudulent websites. A list of verified online pharmacies is on the following page, or you can find a pharmacy at [https:// www.safe.pharmacy/buying-safely/#USvets](https://www.safe.pharmacy/buying-safely/#USvets)

Company	Website
1-800-PetMeds	1800petmeds.pharmacy
Agropec Trading, LLC	allivet.pharmacy
Animal Pharm, LLC	petrx2go.pharmacy
BSB Veterinary Corp	petvaluemart.pharmacy
California Pet Pharmacy	calpetrx.pharmacy
CSR Company, Inc	firstplaceequine.pharmacy
Diamondback Drugs	diamondbackdrugs.pharmacy
Express Veterinary Pharmacy, LLC	Expressvet.pharmacy
FarmVet.com, Inc, dba FarmVet.com	farmvet.pharmacy
Heartland Veterinary Pharmacy, LLC	heartlandvetsupply.pharmacy
Golden Gate Veterinary Compounding Pharmacy	ggvcp.pharmacy
Greenworld Pharmacy, LLC	betpharm.pharmacy
Midwest Veterinary Supply, Inc	jatpharmacy.pharmacy
Lambert Vet Supply	lambertvetsupply.pharmacy
Leedstone	leedstone.pharmacy
Pet Care Rx, Inc	petcarerx.pharmacy
Petco Wellness, LLC	drsfostersmith.pharmacy
PetMart Pharmacy, LLC	petmart.pharmacy
Pet Rescue Rx	petrescuex.pharmacy
PetSmart Pharmacy, LLC	petsmart.pharmacy
Revival Animal Health	revivalanimal.pharmacy
Seminole Animal Hospital Services, LLC	shotvet.pharmacy
VetSource	vetsource
TABcom, LLC	kvsupply.pharmacy
VetDepot	vetdepot.pharmacy
Valley Vet Clinic	valleyvet.pharmacy
VetRxDirect	vetrxdirect.pharmacy
Veterinary Internet Company	vetinternetco.pharmacy
Vets First Choice, LLC	vetsfirstchoice.pharmacy
VIP Pet Meds, Inc	vetapprovedrx.pharmacy

For more information regarding purchasing antibiotics, please feel free to contact my office (805-645-1475) or visit the CDFA Antimicrobial Use and Stewardship website (<https://www.cdfa.ca.gov/ahfss/aus/>).

Sincerely,



Matthew Shapero

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IMPORTANT AND URGENT...
Our office will not be able to send *Livestock and Range News* by hard mail for much longer. It is critical, if you would like to continue receiving the newsletter regularly, please visit our website and enter your email address to receive it electronically in the future.
Please Visit: http://ceventura.ucanr.edu/Live_Stock_-_Range_Programs/

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Livestock and Range News is a newsletter published by the UCCE Livestock & Range advisor serving Ventura and Santa Barbara Counties. The newsletter contains research, news, information, and meeting notices related to the areas of livestock production, rangelands, and natural resource management.