**Spring, 2022**

**FIND THIS NEWSLETTER AND MORE AT:**
**ucanr.edu/BayAreaRangeland**

---


## Spring 2022
## In This Issue

**UPCOMING EVENTS:**
Workshop Series: Beef Cattle Health
Discover Herd Management Opportunities

**NEW UC ANR PUBLICATION**
Beef Cattle on California Annual Grasslands:
Production Cycle and Economics Much of California is annual rangeland, grazed seasonally when forage quality is best. For optimum results, the seasonality of these rangelands must be coordinated with the phases of beef cattle production. This publication walks cattle producers through annual stock flows and calendar of operations and gives tables for estimating costs, return over cash, and gross income under various scenarios. Also included is a discussion of various risk factors

**ARTICLE:**
**Ranch-to-Fork:** The Connection of California's Rangelands to beef is not direct but should be valued.
by Sheila Barry, Livestock & Natural Resources Advisor, San Francisco Bay Area

...Despite the extensive footprint and large number of cattle (5.1 million head of beef and dairy cattle in 2017), few consumers could say that they have purchased beef that was locally raised or even raised in California. Why? <article below>

## Upcoming Events

---

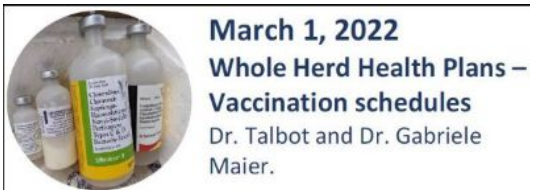
March 1, 8, 15, 22 & 29

**Register at:** http://ucanr.edu/cattle

UC Cooperative Extension in collaboration with UC Davis Veterinary Medicine is excited to offer series of free online webinars for cattle producers. Every Tuesday evening in March from 5:30-7:00 we will have guest speaker presenting with a question and answer session, covering topics important to cattle health and management. This session will be live and will include lots of visuals.

**Please register for one or all session by clicking here.**

For questions or assistance please contact Tracy Schohr, Livestock and Natural Resources Advisor for Plumas, Sierra and Butte Counties at tkschohr@ucanr.edu or 916-716-2643.




Have questions on your beef cattle whole herd health plan? Join us for a free, live, online webinar focused on cattle vaccination programs. Veterinarians will discuss calf, pre-weaning, and annual cow vaccination programs. We will also touch on essential mineral supplements to consider and local vaccination variances. There will also be a question and answer session with Dr. Gabriele Maier, DVM, Cooperative Extension Specialist in Veterinary Medicine, UC Davis and Dr. Tom Talbot a large animal veterinarian in Bishop, Calif.


This webinar will focus on an overview of the biology and management of bovine pinkeye. John Angelos, professor and chair, Department of Medicine and Epidemiology, School of Veterinary Medicine will discuss cattle eye anatomy, pinkeye disease progression, and decision-making for developing treatment plans and prevention programs.


This webinar will focus on an overview of the biology and management of bovine pinkeye. John Angelos, professor and chair, Department of Medicine and Epidemiology, School of Veterinary Medicine will discuss cattle eye anatomy, pinkeye disease progression, and decision-making for developing treatment plans and prevention programs.


Herd bulls are the central component of the success for cow-calf producers. Dr. McNabb will share key strategies to keep your bulls healthy and prevent diseases. He will also discuss common bull injuries and feasibility of treatment options.


When raising cattle, you can often be faced with losses that seem like a mystery. Dr. Gabriele Maier, DVM, Cooperative Extension Specialist in Veterinary Medicine, UC Davis and Dr. Katherine Watson, Pathologist at UC Davis will discuss submitting samples to the California Animal Health and Food Safety (CAHFS) Lab to find answers to why did it die. They will also share unique cases the CAHFS Lab have helped cattle producers identify to improve herd health and management.

## New ANR Publication

**To learn more about Beef Cattle Production Cycle & Economics:**

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources

UC ANR Publication 8687 | October 2021
https://doi.org/10.3733/ucanr.8687
https://anrcatalog.ucanr.edu

UC PEER REVIEWED

# Beef Cattle on California Annual Grasslands: Production Cycle and Economics

**LARRY FORERO,** UC Cooperative Extension (UCCE) County Director for Shasta and Trinity counties and Livestock and Natural Resources Advisor;
**SHEILA BARRY,** UCCE County Director for Santa Clara County and Livestock and Natural Resources Advisor;
**STEPHANIE LARSON,** UCCE County Director for Sonoma County and Livestock and Range Advisor

Much of California is annual rangeland. As the term implies, many of the grasses and broadleaf plants on annual rangeland complete their life cycles in one year—that is, they germinate, grow, mature, produce seed, and die. Annual grasslands are green in the spring; when forage dies later in the year, the "golden hills" of California become evident.

These grasslands are generally grazed seasonally (late fall through late spring) when forage quality is best. In summer and fall, cattle that graze less productive annual grassland are typically moved to irrigated pasture, out-of-state pasture, or mountain rangelands. More productive locations (that is, the Central Coast and North Coast) may be grazed throughout the year.

## Segments of beef cattle production

Beef cattle production in the United States can be broken into four distinct segments, or phases. These phases include the cow/calf, stocker (sometimes called yearling), finishing, and harvest phases.

### *Cow/calf operations*

In a cow/calf operation (fig. 1), a herd of breeding cows is maintained and managed. The cows are bred to produce a calf annually. Purebred bulls are typically run with the cows for a 2-to-3-month breeding season. Removing the bulls at the end of the season helps to ensure uniformity in calf size and age when the calves

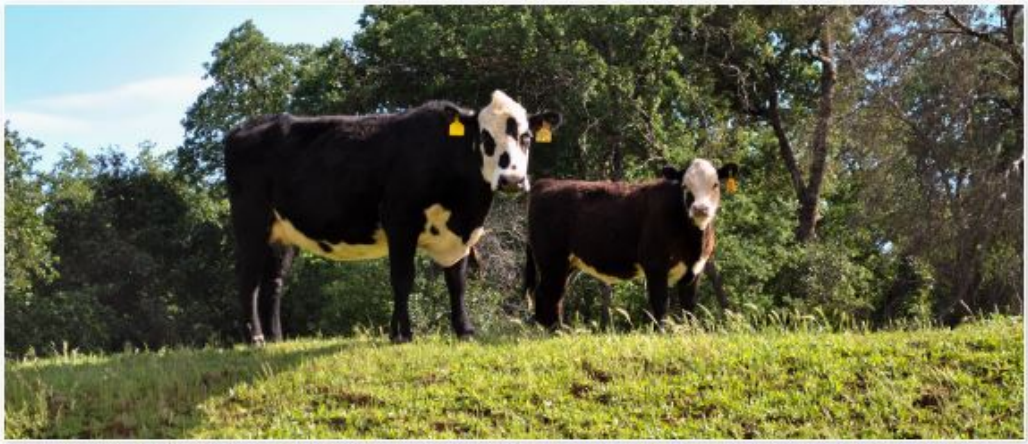


**Figure 1.** Cow-calf pair. Calves such as the animal on the right, raised alongside their mothers, are generally weaned and sold when they weigh about 600 pounds. *Photo:* Larry Forero.

## Article

## Ranch-to-Fork:

### The Connection of California'sl Rangelands to Beef is Not Direct but Should be Valued

By Sheila Barry, PhD

Beef cattle are raised in every county in California, except San Francisco. Livestock, mostly beef cattle

purchased beef that was locally raised or even raised in California. Why?

In short, very few cattle are direct marketed from California ranches, and many cattle leave California to be finished and processed in other states. The final product may return to be sold and consumed in California, but it also increasingly contributes to a globally integrated beef production system. To understand how California's ranchers and grazing lands are connected to the production of beef, I studied cattle movements recorded by the state brand inspectors, collected data from feeder cattle sales, and surveyed and interviewed bay area ranchers. I also considered the opportunities for a new technology, blockchain to support the marketing of "California beef" without changing the current production system, which includes cow-calf, stocker and feed lot operations, and dairies.

The following factors explain a lot of the connection of California's rangelands to beef production. **1)** Ranchers "fit" cattle to forage resources. **2)** Direct marketing is very limited. **3)** Many producers (most small and mid-size producers) rely on auction yards to market their cattle. **4)** Large numbers of calves and yearlings leave California's rangelands for finishing and processing, and **5)** While ranchers get paid for the cattle they sell, ranching requires management of natural resources, e.g. grass, wildlife, water.

**California ranchers move cattle, including selling calves and yearlings from rangelands, to "fit" their forage resources.** Forage on most of California's grazing land is natural growing plants, which are harvested by livestock with little to no agronomic inputs. The "fit" to the resource is demonstrated by the substantial seasonal movement of cattle off California's grazing lands (Fig. 1). Over ½ million head of beef calves and yearlings or about 47% of beef calves and yearlings, that moved off California's grazing lands in 2017, were moved in late spring to summer (May -July). A smaller flush of movement occurred in the fall, October through November, when 16% or nearly 200,000 head (2017) of beef calves were moved from grazing lands (irrigated pastures and summer rangelands). This seasonal movement is in sharp contrast to the 1.2 million head of dairy calves, which are also moved through production systems to contribute to beef production, but with little indication of any cyclical or seasonal pattern (Fig. 1).

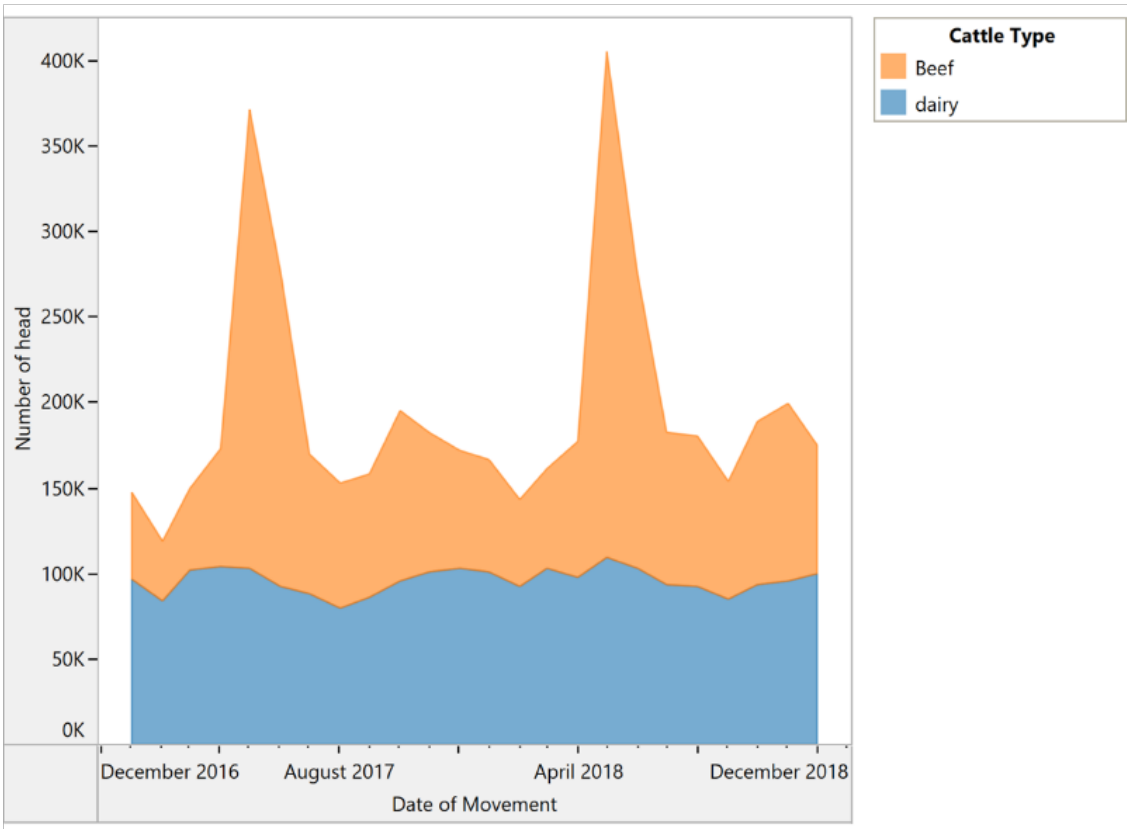



**Fig. 1.** Calves and yearlings (number of head) moving from California grazing lands (beef) and dairies or feed yards (dairy) from January 2017 to December 2018.

Ranchers selling calves and yearlings at feeder sales in May, June, and July in 2019 reported during survey forage quality and quantity as influencing the time they chose to sell their calves or yearlings.

*"This is the typical time of year to sell fall born calves. You could keep them longer when feed is abundant, but calves do not grow well."*

In terms of forage quantity, ranchers noted the importance of leaving feed.

conservation in terms of a desire to prevent overgrazing. Ranchers also acknowledged how their grazing management, including livestock sales, worked to support specific conservation interests.

*"I have no conservations restrictions, but I keep it the best I can. According to the [Natural Resources Conservation Service] NRCS biologist, it remains a good habitat for red-legged frog, California tiger salamander, and San Joaquin kit fox. I sold later than usual because I had excess feed, but there was no impact. I don't like to graze to the ground."*

Ranchers also described how moving cattle, including timing of sales, reduced fire risk, and protected soils.

*"It was good to keep calves a little longer. I graze, so it does not burn. I graze closer [to the ground] next to property boundaries since my neighbors don't graze and have grass six-feet tall. I keep cows and calves out of the hills during the rainy season to avoid erosion. After the rainy season, I jump [the cow and calves are moved] back and forth between hill and flats."*

**Very few beef cattle are direct marketed by California producers**. According to brand inspection records, a small portion of the state's beef producers are "Ranch-to-fork" operations. In fact, only **24,000 head or about 1.5% cattle are direct marketed (2017, Fig. 2).** Other studies have found processing and distribution, along with accessing enough quality forage are all recognized as significant challenges to direct marketing beef.

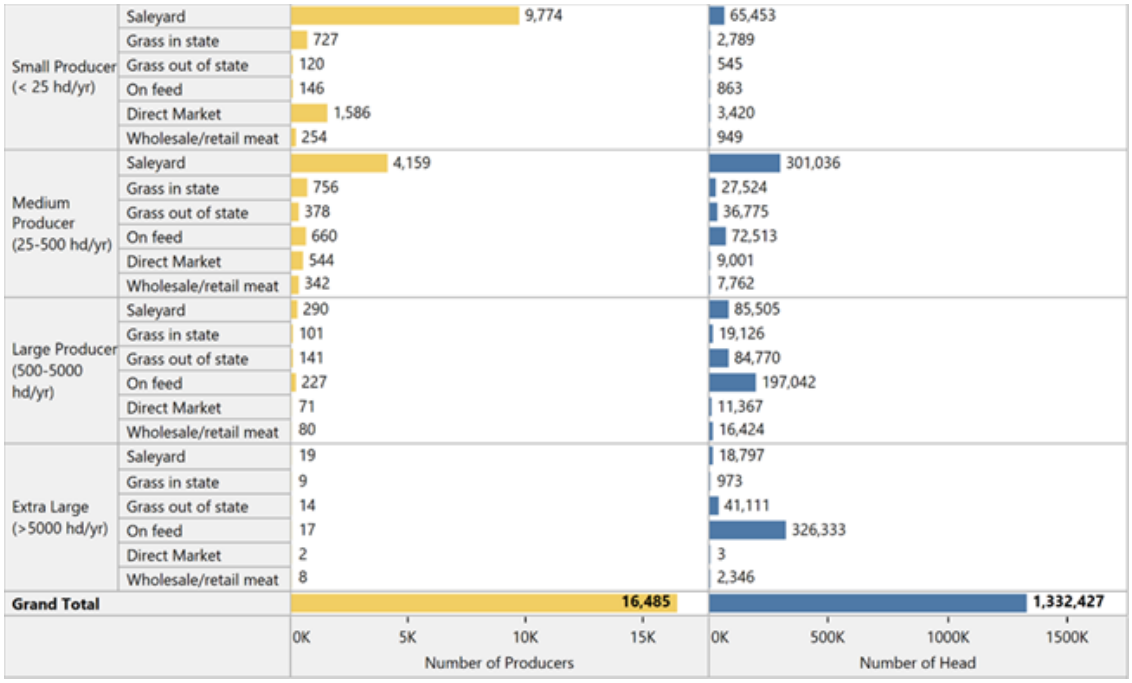
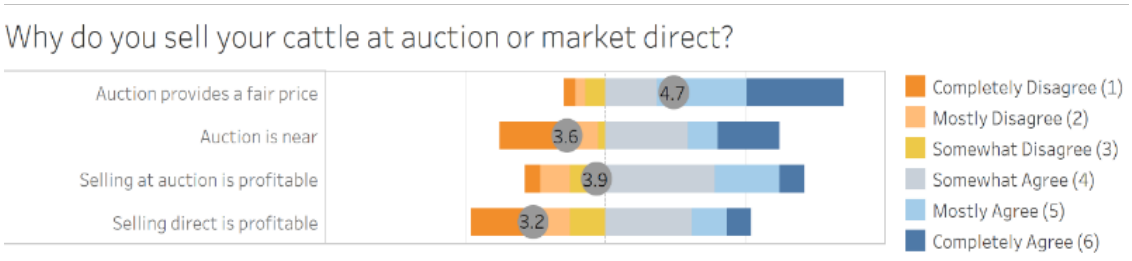



**Fig. 2**: Movements of all beef cattle in California, number of producers and number of head, by producer size (2017). Note: number of producers is only unique number per movement type. They may be counted multiple times with production size class if they use different movement types.

**For all but the largest producers, auction yards are critical**; **they provide for the movement of cattle off grazing lands and into the next phase of production**. Auction yards not only sort, market and support pricing of cattle, but also provide flexibility in marketing cattle of different types, different times of year and provide value for ranchers managing changing forage conditions, e.g., from fire or drought. Small and medium-sized producers (< 500 head) market nearly 70% of their cattle through an auction yard (366,000 head in 2017). While auction yard may not be nearby for some ranchers, there was broad agreement among bay area ranchers that the auctions provided a fair price for their cattle (Fig. 3).




**Most beef cattle leave California's grazing land for finishing.** Whether through retained ownership or

Culled beef cows and bulls are the exception, with most moving directly from grazing land to a meat processing facility. Culled cows are the largest class of beef cattle going directly from California grazing lands to processing. In 2017, nearly 17% of the beef cow herd or 109,000 cows was replaced with most of these cows going directly to slaughter. The dairy industry in California with a much higher replacement rate (40%) contributed 7 times as many cull cows to beef production (2017).

**California ranchers are not just connected to food production but also conservation.** A common theme among California ranchers is a commitment to good grazing management regardless of land ownership or conservation requirements. This view was clearly articulated during ranchers surveys:

*"I have no directive for conservation, but as all cattlemen, I convert grass to beef, so we need to manage grass…I manage it, all the same, to keep grass."*

*"I graze all lands similarly. If you take care of the land, it takes care of you.*

Keeping ranchers viable is increasing recognized as a benefit to the conservation of California's natural landscapes. Many of the high ecosystem services values provided by rangelands are lost if these lands are converted to more intensive uses. From 1984 to 2008, over nearly ½ million acres of California's rangeland was converted to more intensive agriculture or housing (Cameron et al. 2014). There is growing interest in valuing ecosystem services provided by rangelands and incentivizing or paying ranchers to provide them. Ranchers surveyed in the San Francisco Bay area overwhelmingly agreed that they grazed for resource managements reasons like reducing fire fuels, controlling weeds or improving wildlife habitat, but many disagreed with graze because it is profitable and nearly all disagreed with the statement that they "get paid to graze." (Fig. 4 )

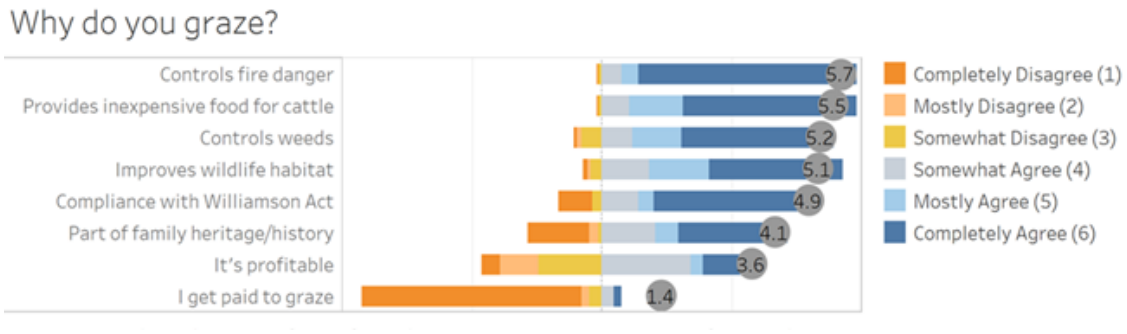



**Fig. 4** Bay Area ranchers' survey responses to statements about why they graze. Number is circle represents average score from 110 responses.

Certainly, there are straight economic considerations that influence when ranchers' decisions move (or sell) cattle off of California grazing lands or to invest time and resources to develop ranch-to-fork enterprise. However, in the rancher interviews, even economic reasons for selling like changing market conditions or the need for cash were typically explained within the context of resource management.

*"The market was going south. I could save a little feed by selling now."*

*"I was watching the market and needed cash. I only marketed the heavy end because I have grass [irrigated pasture] for the lighter cattle to go on."*

*"I had feed and prices were low, but I needed cash to pay bills."*

The decision to sell cattle driven by seasonal changes in forage quality and quantity and a commitment to resource protection should not, however, undermine the fact that selling livestock is essential to the economic sustainability of ranching. One of the auctioneers at the beginning of each of his feeder sale reassured the ranchers present that the sale yard understood this:

*"I know this is your paycheck for the year, and we take it very seriously."*

**The Future**

The beef production system continues to evolve. We have seen growing consumer interest in grass-fed beef, and COVID- related plant closures spurred new ranch-to-fork operations, and more. Where can we go from here? Are there options for ranchers to capture more from the marketplace? As it stands now, beef that originates from extensive rangelands is generally not differentiated from dairy beef, for example. Other than physical information that can be visually assessed or measured, such as weight, hide, sex, frame size, and hot-iron brand if available (ranch origin), information including vaccine records, care practices, feed sources is not transferred through the production systems unless the cattle are associated with a specific value-added program. Current value-added programs for meat products like natural, organic or grass-fed are limited in the attributes of beef and its production that they account for and promote. So what is next…

There are new disruptive technologies that decentralize information and control, like blockchain, which

This newsletter is provided by the UC Cooperative Extension Natural Resources Program in the San Francisco Bay Area and provides information to managers of both public and private rangelands. RANGELAND, which is land characterized by natural vegetation i.e., grass, forbs and shrubs and managed as a natural ecosystem, is the predominate source of OPEN SPACE in the San Francisco Bay Area.

Sheila Barry, UCCE Bay Area Natural Resources/Livestock Advisor
Certified Rangeland Manager #63
sbarry@ucanr.edu 408-282-3106

**ANR NONDISCRIMINATION AND AFFIRMATIVE ACTION POLICY STATEMENT FOR UNIVERSITY OF CALIFORNIA**

It is the policy of the University of California (UC) and the UC Division of Agriculture & Natural Resources not to engage in discrimination against or harassment of any person in any of its programs or activities (Complete nondiscrimination policy statement can be found at http://ucanr.edu/sites/anrstaff/files/215244.pdf )

Inquiries regarding ANR's nondiscrimination policies may be directed to John I. Sims, Affirmative Action Compliance Officer/Title IX Officer, University of California, Agriculture and Natural Resources, 2801 Second Street, Davis, CA 95618, (530) 750-1397.