

CTAHR KAUAI COUNTY LIVESTOCK NEWS

“Agriculture of the Middle”

Notes from the SARE Strengthening Ag Infrastructure Conference



Photo courtesy of G. Fukumoto

Stacy Davies of Country Natural Beef speaks at a breakout session on niche meat marketing. Other panelists included Joel Huesby and Bruce Dunlop (at right), both with extensive niche marketing background.

The USDA Sustainable Agriculture Research and Education program’s western region serves farmers and ranchers from the arid Great Basin to the isolated, tropical atolls of the Pacific Basin. With such a diverse cultural, economic, and ecological client base, it is interesting to note that a common theme among several sub-regional listening session conferences was gaps and barriers in agricultural infrastructure. Western SARE held the “Strengthening Agriculture’s Infrastructure” Conference in response to this region-wide need from December

3-5, 2012 in Portland, Oregon. Videos and presentation slides will be uploaded to the conference website at <http://www.westernsare.org/Conferences/Strengthening-Agriculture-s-Infrastructure-Conference>.

Fred Kirschenmann of the Leopold Center for Sustainable Agriculture gave an excellent keynote address framing the issues most farmers and ranchers in Hawaii must face. Currently, there are essentially only two markets available: small-direct (e.g. farmer’s markets, CSA’s), and large-commodity with no product

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“You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.”

– R. Buckminster Fuller (1895-1983)



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differentiation. The “Agriculture of the Middle”, as Kirschenmann terms everything falling in between, is that which improves on the infrastructure that will give farmers and ranchers more choices. The “death zone” is where small-scale producers market a commodity (i.e. competing with large farms). The goal then is to transition to enable small-scale producers to sell differentiated, value-added products in a wide market. Several other speakers represented cooperatives and companies that have done this successfully - Country Natural Beef, Organic Valley, Shepherd’s Grain, and others. Kirschenmann made several points to ponder: Think and plan for resilience; Can I still do what I’m doing when oil reaches \$300/barrel, with twice as many “weird” weather events, or half as much water?; Cooperation vs. domination - a partnership approach is vital for improving infrastructure; Relationships are at the core of this new market of the “Middle”.

The main theme repeated by those who have succeeded in overcoming many challenges to get their high quality products to ready markets was simply this: unfettered cooperation. The human dimension was the biggest challenge for each of the companies we heard from. Transparency in partnerships, shared success, and trust are simple traits, not necessarily easy to build, but key for the future. If we can’t play nice with each other, we can only expect few to be in the game much longer. In the end it’s just about what I tell my kids - kind words, kind hands, work together, be responsible.

I picked up many other things to think about which I will report in bulleted “sound bites”. I hope it will entice you to check the website for when the videos, audio, and slides are uploaded.

Ken Meter, Crossroads Resource Center:

- “Value network” vs. linear value-chain model.
- “Our growth is based on Snowville’s growth,” Jeni Bauer on relationship between a producer and a processor.
- \$5/week spent on local food would earn \$28 million in local farm income in an Oregon region; This amount rivals USDA program spending in the same area.

Karl Kupers, Shepherd’s Grain Cooperative:

- Transparent cost of production analysis for co-op members to determine flat rate and premium payments.
- You cannot build a brand without quality.
- Be open and direct with value-chain partners.
- Resist the urge to change values or brand.

Theresa Marquez, Organic Valley Dairy Co-op:

- Soon to be \$1 billion sales company but average member herd is 65 head.
- Process in over 90 plants = piggy back model: what’s already happening well with infrastructure and how to join?
- Be transparent, be authentic, tell your story.



(L-R) Matt Stevenson, CTAHR; Connie Hatfield, Country Natural Beef co-founder; Glen Fukumoto, CTAHR

Photo courtesy of G. Fukumoto

Stacy Davies, Country Natural Beef:

- Key to CNB success is in building partnerships with all sectors that connect to consumers.
- Make what consumers want if you want to be a price setter (not taker).
- Improving infrastructure? Partner with people who are already experts in their field.
- Set baseline payment by averaging cost of production across member ranches.
- Plan for success (i.e. outselling production) to avoid growing pains.
- “There’s never a happily ever after. Always challenges.”
- “Sometimes you have to compromise to stay independent.” – Doc Hatfield, CNB co-founder.



Tools for Drought Planning

A little planning plus a lot of hope equals good preparation.



“Simply hoping for the drought to end is not a management tool to use. Attack it head on and attack it early.”

— Greg Judy, *Acres USA magazine*
November 2012

HOPE FOR THE BEST, BUT PLAN FOR THE WORST

“Drought is a normal part of climate...it will happen again. Fortunately, there are things you can do before, during, and after drought to reduce your risk.” So begins the overview page of the Managing Drought Risk on the Ranch website produced by the National Drought Mitigation Center in Nebraska. In 2008, folks from this organization gave an excellent workshop in Kona outlining what tools and information are available for free to ranchers. As several areas on Kauai have been severely dry this year following state and national trends, I felt a review may be useful even as we enter the “wet” season. As I write this in late November, the U.S. Drought Monitor lists all

of Kauai as abnormally dry and the southern half of the island as moderate to severe drought.

Why does it matter? Short feed like the photo above of a Kauai pasture in September is certainly what most folks think of first with drought. But in addition to painful culling or weaning decisions that come with short feed, there are several unseen impacts from drought: lower pregnancy rates, insect outbreaks, weed encroachment, plant poisonings, and others. Of no less importance is the emotional stress on ranch families during the uncertainty of drought. Maui has been particularly hard hit the last few years, and one rancher there told me that if this is another dry winter it will “break my ranch.”

Do you have a drought management plan? A “yes” answer doesn’t count if your plan is filed in your head! Impacts from decisions made on the fly during a severe drought can ripple through your herd or pasture productivity and bottom line for several years. Taking the time to sit down with everyone involved in running the ranch - land owners, family members, herd managers, ranch hands - to sketch out specific strategies *before* a crisis can go far to alleviate stress *during* a crisis.

One aspect of drought management planning as presented at the 2008 workshop I particularly liked was designating triggers for specific actions. For example, if you can carry 100 cows based on X amount of rainfall in your

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area, and if you have <75% (or 80% or 65%, you decide) of X precipitation by the start of the dry season, then reduce herd by Y head (or purchase feed, lease more pasture, etc. - again, ahead of time you decide what you are willing to do). One of the more aggravating aspects of drought is that you may be several weeks or months into one before you know it's happening. By working out triggers and actions based on your experience and record keeping, you can be on better footing as a drought progresses.

The 2009 CTAHR Extension Publication titled "Management of Production Risk for Hawaii Ranchers" by Dr. Mark Thorne, Dr. Linda Cox, and Glen Fukumoto lists several key considerations for drought management planning:

- Determine availability of alternative or reserve forages to reduce grazing pressure on pastures.
- Reserve 10-20% of forage resources in case vegetation recovery falls short.
- Calculate stocking rates for each pasture.
- Keep and use accurate grazing records for each pasture.
- Make and implement decisions early to avoid crises.
- Resist the temptation to restock to former levels in the year following drought.
- Use next year's forage production for restoring protective plant litter and and improving plant vigor.
- Plan to delay grazing a paddock for 1-2 weeks following first green up after rain. This delay may result in 10-20% increase in forage production (also helps reduce risk of grass tetany or staggers -- a disorder from blood magnesium deficiency associated with rapid forage growth following extended dry periods).

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OVEN ROAST OF BEEF



Photo: robbie jim, wikimedia.org

I know I'll be doing a Kauai beef roast for the holidays, how about you?

From: "50 Years of 4-H Cooking", Maui 4-H Organization, Cooperative Extension Service, Kahului, HI, ca. 1980.

- 4-6 lbs. standing rib of beef or top round, boned, rolled and tied**
- 1 clove garlic or garlic powder**
- 1 T. salt**
- 2 t. pepper, freshly ground**
- 1 crushed bay leaf**
- 1 halved onion**
- 1 carrot, halved lengthwise**

Let meat stand at room temperature for 30 minutes. Wipe with damp cloth. Cut garlic clove lengthwise and rub thoroughly over all surfaces of roast. If powder is used, sprinkle lightly over all surfaces. Rub meat with salt and pepper.

Place roast on rack in an uncovered pan, fat side up. Sprinkle crushed bay leaf over top. Fasten onion and carrot to top of roast with toothpicks. Insert meat thermometer in center of roast.

Place roasting pan with meat in center of preheated 300 degree oven. Do not cover and do not add water. Roast at 300 degrees until thermometer indicates degree of doneness desired; 140 degrees is rare, 160 degrees is medium, and 170 degrees is well done. Remove roast from oven and allow to set for 15 minutes before slicing. Do not pierce with a fork or juices will escape. Pour off excess fat in roasting pan; add a cup of hot water and simmer on stove to produce a rich natural gravy. Slice roast thin and serve with gravy.



RESEARCH ROUND-UP

This section briefly summarizes current and historical livestock and pasture research that may be of interest to Kauai's producers. These synopses are provided for information only and inclusion or exclusion of research articles here is not meant as an endorsement or rejection of referenced material.

Kauai grass-finished beef in the 1980s

In a 1987 study by CTAHR agricultural economist and Beef Initiative Group member Dr. Linda Cox, Kauai ranchers stood out as consistently commanding higher prices for their grass-finished beef carcasses compared to the rest of the state. While the ranchers got paid better, consumers paid less at the counter for retail cuts compared to imported beef counterparts. Kauai grass-finished beef had better marbling than mainland or local grain-finished beef and was equal in tenderness to imports. Of 124 people interviewed at a shopping mall, 32% purchased Kauai beef. Does any of this hold today?

Cox, L. 1987. *The market potential for grass-finished beef in Hawaii*. Proceedings: Mealani Beef Cattle Field Day, UH-CTAHR.

The complicated role of pasture structure in grazing behavior

Brazilian researchers working in the temperate Pampa grassland system in southern Brazil, Uruguay, and Argentina evaluated the relationship between pasture structure and livestock grazing behavior. For simplicity sake, most grazing management is based on allocating a certain amount of feed for a certain time to a certain number of animals without taking structure into account. Pasture structure refers to forage height, type such as bunch grass or sod grass, and distribution of palatable or preferred species versus non-preferred. These researchers demonstrated that regardless of season or preset forage allowance, cattle balanced their time spent eating against a relatively narrow window

of sward structure conditions in this environment. In other words, what is in your pasture and how it is arranged may be more important than how much is in your pasture in terms of grazing efficiency in extensive grazing management systems. Future research needs to further illuminate this relationship and evaluate the costs and benefits of modifying an easy to use and vetted forage allowance management approach.

Da Trindade, J.K. et al. 2012. *Forage allowance as a target of grazing management: Implications on forage time and forage searching*. Rangeland Ecology & Management, vol. 65, iss. 4, pgs. 382-393.

Reducing transport stress in lambs

High stress at slaughter can result in poorer meat quality and yield. Researchers in Brazil found that transporting in closed compartments (i.e. no view of the outside) was less stressful on Dorper X Santa Ines hair lambs than open compartments. Furthermore, resting lambs for 3 hours after arriving at the slaughterhouse significantly reduced blood cortisol concentration (an indicator of stress) but not quite to pre-transport levels.

Da Cunha Leme, T.M. et al. 2012. *Influence of transportation methods and pre-slaughter rest periods on cortisol levels in lambs*. Small Ruminant Research, vol. 107, iss. 1, pgs. 8-11.

Don't give up on those skinny range cows

Rebreeding interval can have a serious economic influence on a cow operation. Previous studies have indicated that cows, and particularly first calf heifers, would be expected to have reduced reproductive efficiency with a Body Condition Score (BCS) of less than 4.5 at calving. Certainly, calving at BCS 6-7 would be ideal but is often difficult to achieve in droughty, extensively managed range systems like the leeward sides of Hawaii.

USDA researchers in New Mexico evaluated

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over 350 Angus and Angus X Hereford cows over 6 years and found that BCS at calving was not useful in predicting reproductive success at the herd level for the study environment. Furthermore, calf body weights at birth and weaning were not influenced by cow BCS. All effects were independent of precipitation over the study period. Of note was that the cows in this study were described as managed and selected to fit their environment of native Southwestern range. Mulliniks, J.T. et al. 2012. *Relationship between body condition score at calving and reproductive performance in young postpartum cows grazing native range*. Journal of Animal Science, vol. 90, iss. 8, pgs. 2811-2817.

Rain, heat, and humidity favor *Haemonchus* climbing ability

In yet another Brazilian study, researchers found *Haemonchus contortus* (barber pole worm) infectious stage larvae are better climbers of signal grass (*Brachiaria decumbens*) in wet (4" precipitation over 7 of 13 days), warm (66 - 108F), and humid (>68% RH) conditions. Most larvae climbed higher than 8" in these conditions, but the remainder of the time stayed predominately near the base of forage plants. Larvae reached upper grass heights within 24 hours of deposit in these conditions peaking at 7 days. During periods of no rain, high levels of larvae were found in the feces representing an infectious reservoir during dry periods that are able to mobilize following rain.


Santos, M. et al. 2012. *Environmental factors influencing the transmission of Haemonchus contortus*. Veterinary Parasitology, vol. 188, iss. 3-4, pgs. 277-284. 

PHOTO QUIZ




Last issue's quiz - What's wrong with this goat, if anything?

Answer: Several folks responded to this one noticing the swelling below the jaw (edema) caused by heavy parasite loads. Well done! It does in fact have 4 legs (I didn't notice the funny angle of the shot until many people guessed that). Other things to look for with wormy goats are: difficulty keeping up with a moving flock (that's how I got a picture of this one, the rest fled), poor condition for feed available, pale soft tissues (eyes, lips, vagina), and rough coat.



This issue's quiz - This cow pie on Maui has been broken open by someone's boot (on purpose). What's so special about it and why should I care?

Send your ideas, comments, or snarky remarks to Matt at stenenso@hawaii.edu. The answer will be discussed in the next issue. 

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- Improve livestock distribution on range or pasture to make better use of forage resources.

Below are a few more tools for assisting your drought plan development. There are many others from different sources. Frankly, what matters to me more is not which route you take, but that you have a clear, well thought out plan to follow at all. Finally, here's to hoping for a nice wet (but not too wet) winter for everyone. Keep me posted.

Resources for Drought Management Planning:
 Management of Production Risk for Hawaii Ranchers. UH-CTAHR Cooperative Extension Service, <http://www.ctahr.hawaii.edu/oc/freepubs/pdf/PRM-5.pdf>.

Managing Drought Risk on the Ranch. National Drought Mitigation Center, <http://drought.unl.edu/ranchplan/Overview.aspx>.

U.S. Drought Monitor. <http://droughtmonitor.unl.edu/monitor.html>.

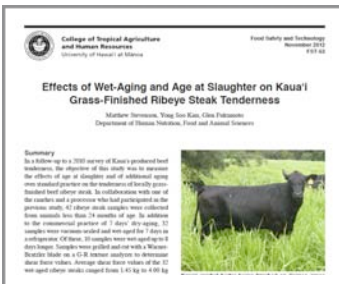
Planning for Drought. Ranching for Profit, <http://www.ranchmanagement.com/Droughtplanning.pdf> 

NEW FROM CTAHR EXTENSION



Two new extension publications that may be of interest to Kauai livestock producers are now available for free download:

An Introduction to Sheep and Goat Parasite Management in Hawaii
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/LM-24.pdf>



Effects of Wet-Aging and Age at Slaughter on Kauai Grass-Finished Ribeye Steak Tenderness
<http://www.ctahr.hawaii.edu/oc/freepubs/pdf/FST-53.pdf>

*****NOTE*****

To conserve resources, the Kauai County Livestock News is now a completely digital publication. However, if you do not have Internet access or do not use e-mail and would like to receive a hard copy of this newsletter, please call me at the number below with your name and mailing address.

Dried grasses
 and just a few heat waves
 rising an inch or two.
-- Bashō (1644 - 1694)



Matthew Stevenson
Livestock & Range Programs
Kauai Extension Office
3060 Eiwa St., Rm. 210
Lihue, HI 96766
Tel: 808-274-3472
Fax: 808-274-3474
stevenson@hawaii.edu
 UH is an EO/AA Institution