

The Roundup

Livestock and Range
Newsletter
Kern, Tulare, and Kings

University of California
Agriculture and Natural Resources

August 2018

Welcome to the Roundup! I hope this newsletter finds everyone well! In my previous newsletter I had shared that I would no longer be able to produce the newsletter in print due to the cost of folding and tabbing. After printing that announcement I received an offer from a most generous volunteer to help fold and tab by hand. As a result of the efforts of this wonderful person, we are able to continue printing the newsletter for many subscribers. Thank you Anita!

In this newsletter you will find:

- Information on Virulent Newcastle Disease (Page 1)
- The Case of the Druggie Chickens (Page 3)
- Beef Cattle Market Relationships (Page 4)
- Information on the UC Davis Backyard Egg Study (Page 6)
- AB 589 Short Course for Water Diverters (Page 6)

Julie Finzel

Livestock and Natural Resources Advisor

UC Cooperative Extension-Kern, Tulare, and Kings Counties

1031 S. Mt. Vernon Ave.

Bakersfield, CA 93307

661-868-6219

jafinzel@ucanr.edu

<http://cekern.ucanr.edu/livestock>

Keeping Your Birds Safe from Disease:

by Jennifer McDougle, Veterinarian, Animal Health Branch, Tulare District Office

The California Department of Food and Agriculture (CDFA) has identified a case of **virulent Newcastle disease** in a small flock of backyard exhibition birds in Los Angeles County and San Bernardino counties. The case was detected at the UC Davis School of Veterinary Medicine's California Animal Health & Food Safety Laboratory (CAHFS) when a private practitioner submitted a sick bird for testing. This is the first case of virulent Newcastle disease, previously referred to as exotic Newcastle disease, in the U.S. since 2003. CDFA is working with federal and local partners as well as poultry owners to respond to the finding. State officials have quarantined potentially exposed birds and are testing for the disease.

Virulent Newcastle disease is a highly contagious and deadly virus in birds; the virus is found in respiratory discharges and feces. Clinical signs in birds include:

- sneezing
- coughing

- nasal discharge
- green watery diarrhea
- depression
- neck twisting (example attached)
- circling
- muscle tremors
- paralysis
- decreased egg production
- swelling around eyes and neck
- sudden death.

It is essential that all poultry owners follow good biosecurity practices to help protect their birds from infectious diseases such as Newcastle. These include simple steps like *washing hands* and *scrubbing boots* before and after entering a poultry area; *cleaning and disinfecting tires and equipment before moving them off the property*; and *isolating any birds*. New or returning birds from shows should be isolated for 30 days before placing them with the rest of the flock.

For backyard flock owners, biosecurity measures include using dedicated shoes and clothes when caring for them and not to use/wear those clothes/shoes in other areas.

Additional information on biosecurity can be found at:

- <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian-influenza-disease/birdbiosecurity>
- https://www.cdfa.ca.gov/ahfss/animal_health/BioSpecies/BioPoultry.html
- https://www.cdfa.ca.gov/ahfss/animal_health/pdfs/AI/BiosecurityForBackyardAndPetBirds.pdf
- <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian-influenza-disease/birdbiosecurity>
- <http://ucanr.edu/sites/poultry/biosec/>

In addition to practicing good biosecurity, all bird owners should report sick birds or unusual bird deaths through California's Sick Bird Hotline at 866-922-BIRD (2473). Additional information on VND and biosecurity for backyard flocks can be found

at https://www.cdfa.ca.gov/ahfss/Animal_Health/Newcastle_Disease_Info.html

Sick or dead backyard birds can be submitted to CAHFS laboratories for post-mortem examination (\$20 plus shipping and handling). Information on this program can be found at:

https://www.cdfa.ca.gov/ahfss/Animal_Health/pdfs/CAHFS_NecropsyFactsheet.pdf

For additional information on who to contact for issues regarding backyard poultry, see:

<http://ucanr.edu/sites/poultry/contact/>

Virulent Newcastle disease is NOT a food safety concern. No human cases of Newcastle disease have ever occurred from eating poultry products. Properly cooked poultry products are safe to eat. In very rare instances people working directly with sick birds can become infected. Symptoms are usually very mild, and limited to conjunctivitis and/or influenza-like symptoms. Infection is easily prevented by using standard personal protective equipment.

If you have any questions, please do not hesitate to call the Animal Health Branch Tulare District Office at 559-685-3500.

If any of you would like access to the information found on the links embedded in this document and you do not have computer access, please call Julie at 661-868-6219.

The Case of the Druggie Chickens: Jimsonweed Toxicity in Chicken Pullets

by Julie Finzel

In July of 2017, a veteran chicken owner in the Lake Isabella Valley noticed that her four month old Ameraucana and Australorp pullets were eating the Jimsonweed (*Datura stramonium*) plants in their enclosure. She had left the plants in the enclosure to provide some shade for the young chickens during the hot summer months. At first she disregarded their behavior as the pullets never showed any adverse behavior or went off their normal feed. After they had eaten half of the leaves off about 12 large plants, she decided she better remove the plants anyway. The pullets consumed only the leaves, no seeds, over a period of about two weeks.

The owner thought nothing more about it as the young chickens were growing normally, until the pullets hit six months, seven months, and then eight months old and they still weren't laying eggs. After doing some research on her own and not finding much information that was specific to chickens, she contacted the UC Cooperative Extension office in Kern County to try to learn if her chickens would ever lay eggs, and if they did, would the eggs be safe to eat.

Jimsonweed is a member of the Nightshade family and is known to contain alkaloid toxins that are poisonous to humans and livestock. All parts of the plant contain the toxins, but they are especially concentrated in the seeds. Jimsonweed grows up to about 5,000 feet in elevation and is found in many parts of California and the United States. A literature search turned up an article by Kovatsis et al., from 1994, which documented a study from Greece where the alkaloid toxins found in Jimsonweed were fed to a group of laying hens. There were four dosing levels 1.5, 15, 75, and 150 mg/kg fed to the study groups. Effects were seen only at the 150 mg/kg dose. For the first five to six weeks the high dose group saw a decrease in egg production. After five weeks, significant increases in heartrate were observed in the same group. Egg weight, egg shell thickness, and body weight were unaffected. Further, upon necropsy, no obvious signs of alkaloid toxicity were observed. A sister study was conducted by Kovatsis et al (1993) on broilers. The general conclusion from the two studies is that meat and eggs from chickens that have ingested Jimsonweed are safe for human consumption.

In mid-December 2017, the Australorp hens began laying eggs and about two weeks later the Ameraucana hens also began laying. The hens look and act normal, however, they all insist on laying their eggs in the same box.

Sources:

Kovatsis, A., J. Flaskos, E. Nikolaidis, V.P. Kotsaki-kovatsi, N. Papaioannou, and F. Tsafaris. 1993. *Toxicity study of the main alkaloids of Datura ferox in broilers*. Food and Chemical Toxicology. 31: 841-845.

Kovatsis, A., V.P. Kotsaki-kovatsi, E. Nikolaidis, J. Flaskos, S. Tzika, and G. Tzotzas. 1994. *The influence of Datura ferox alkaloids on egg-laying hens*. Veterinary and Human Toxicology. 36: 89-92.

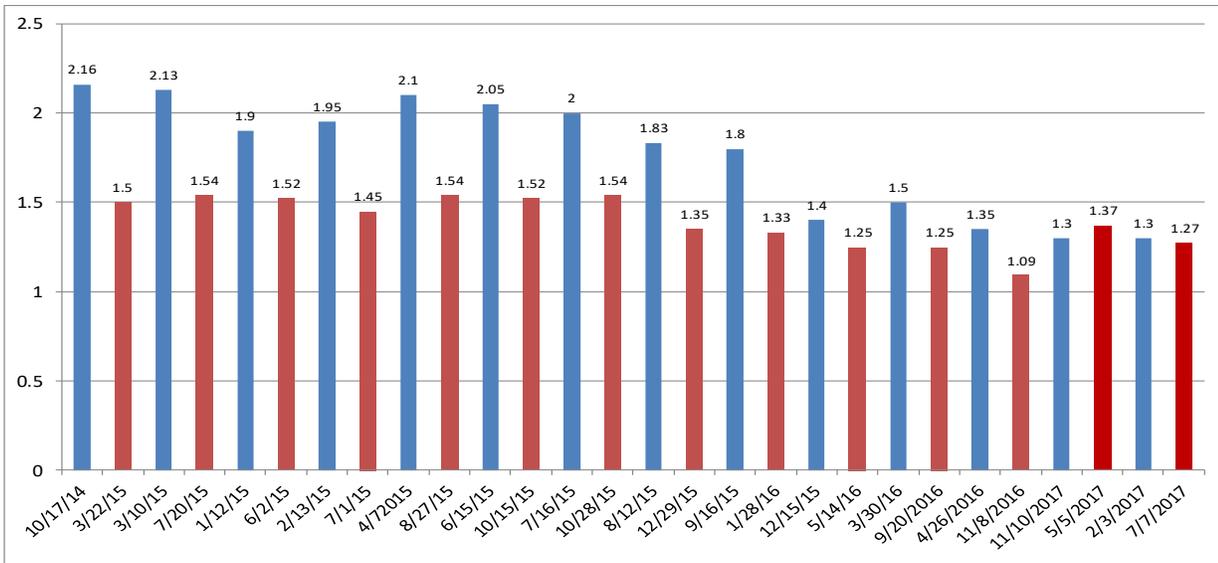
Beef Cattle Market Relationships

Larry Forero, UCCE Shasta/Trinity, Livestock Farm Advisor
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 per pound sale price. Note that from 10/17/16 purchase through 1/28/16 sale, the price per pound difference between purchase and sale was significant.

Figure 1. Ranch-Rail Buy/Sell Data in Date order



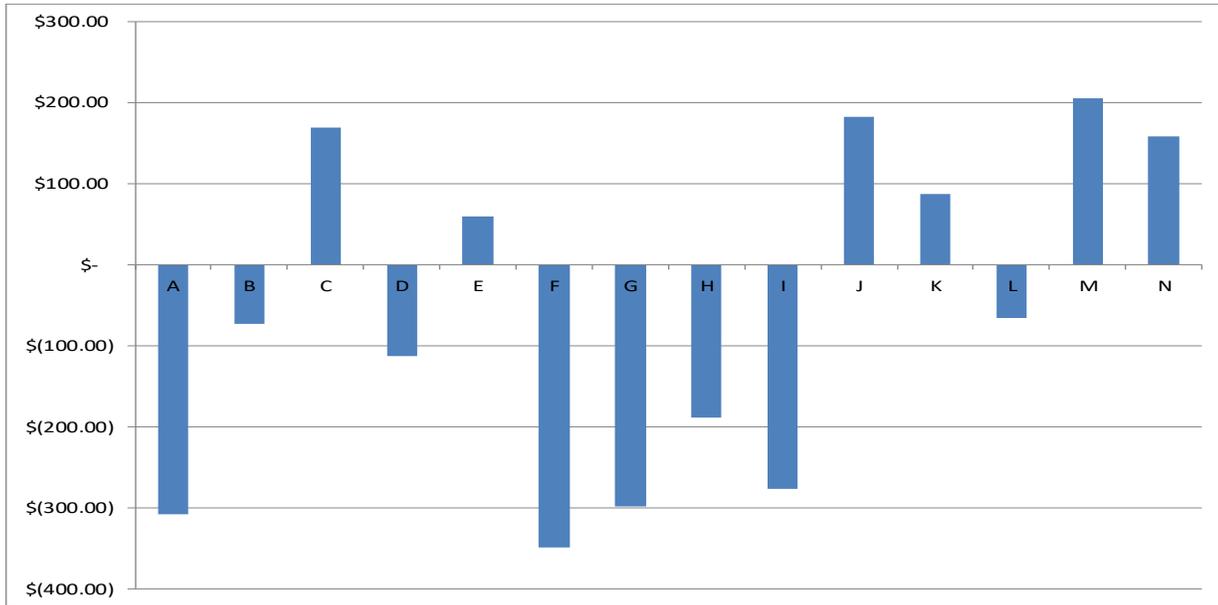
Profitability on these ranch to rail steers is calculated by subtracting gross sale receipts from cash costs. Only cash costs are considered (feeder cattle, feed costs, vaccine and freight) labor, equipment and capital costs excluded. To illustrate this, the relative stable feed costs on a per pound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

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 two looks at the return over cash costs. Feed prices moved up in the past six months making the last two sets of cattle some of the more expensive cattle to feed, however, figure two notes that both those cattle made money illustrating 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- 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 price 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.
- Preconditioned, vaccination program (i.e., booster shots-including but beyond just an 8 way and 4 way). Preconditioning programs including a boosted IBR/BVD/PI3 modified live vaccine (branding and pre-weaning), and a pre-weaning Pasteurella is desirable.

UCANR Backyard Egg Study

The UCANR poultry researchers are conducting a study on backyard egg safety. Tests include post-fire contaminant testing (for areas near recent fires) and heavy metal contaminant testing. If you would like to have your eggs analyzed you can mail them in and have them tested for free. Results will be shared directly with each owner. Statewide results will be summarized and shared, anonymously, with the public. Instructions for submitting eggs are:

- 1) Individually wrap eggs in tissue and place in egg carton;
- 2) Wrap egg carton in bubble wrap and put lots of padding in the box;
- 3) Include a piece of paper with the information listed below
 - Address where hens reside (Street name, City, Zip -- we do not need the number of the address)
 - County where the hens reside
 - Number of hens in flock
 - Date eggs were collected
 - Length of time you have owned the chickens
 - Age of chickens
 - Year the coop the chickens live in was built
 - Year your house was built (Note: our goal with this information is to determine if the chickens may have any contamination from lead paint used before 1978)
- 4) Ship eggs to:
UC Davis School of Veterinary Medicine
1 Shields Ave.
Bldg VM3B Room 4007
Attn: Dr. Maurice Pitesky
Davis, CA 95616

For more information visit: http://ucanr.edu/sites/poultry/Egg_Contaminant_Testing/ or https://www.youtube.com/watch?time_continue=3&v=3ZlytIUIS3I

AB 589 Short Course Information and Summary

Senate Bill 88 requires that all water right holders who divert more than 10 acre-feet a year measure and report the water they divert. For diversions greater than 100 acre-feet (see my previous newsletter) SB 88 requires installation and certification of measurement methods be approved by an engineer, contractor, or other professional. AB 589 provides a self-certification option (AB 589 (Bigelow) - Water diversion: monitoring and reporting training). AB 589 allows a water diverter who has completed a course on measurement devices and methods administered by the University of California Cooperative Extension

and passed a proficiency test to be considered a “Qualified Individual”. While this course was developed for water diverters who divert more than 100 acre-feet of water each year, there have been course participants who divert less than 100 acre-feet of water each year. Post-course feedback indicates that the course is helpful for all water diversion reporting.

The AB 589 short course is about three hours long and fast-paced. A local course is scheduled for October 23 at the UCCE office at 1031 S. Mt. Vernon Ave. from 8:00 – 10:30 A general outline of course topics is provided below. If you are interested in attending the AB 589 short course, please contact Julie at 661-868-6219. A flyer and registration information is below.

1. Open Ditch Flow Unit
 - a. Open Ditch Flow Powerpoint Slides (Larry Forero)
 - b. Open Ditch Proficiency Test
 - c. SPO-4.1.1.3 Stream Flow Using Float to Measure Velocity (taken from SWRCB Website)
2. Measurement Weir Unit
 - a. Measuring Water with a Weir Powerpoint Slides (Larry Forero)
 - b. Weir Proficiency Test
 - c. Low Cost Methods of Measuring Diverted Water (ANR Publication 8490)
3. Measuring water in Pipe Unit
 - a. Powerpoint Slides (Allan Fulton)
 - b. Quiz
 - c. Publication 8213 Measuring Irrigation Flows in a Pipeline
4. Reporting Unit
 - a. Powerpoint Slides (Larry Forero)
 - b. Quiz
 - c. Alternative Compliance
5. Calibration and Accuracy of Measuring Devices
 - a. Powerpoint Slides (Khaled Bali)
 - b. Quiz
6. Determining Reservoir Diversion Quantity
 - a. Powerpoint Slides (Khaled Bali)
 - b. Quiz
 - c. Measuring Water in a Pond or Reservoir
 - d. Example depth capacity curve
 - e. Staff Gauge-Reservoir
 - f. NRCS Pond plan lay-out
7. Additional Materials
 - a. Stockpond Registration
 - b. Example of Stockpond reporting

Complying with SB88 - Water Measurement and Reporting Short Course October 23, 2018

LOCATION: UC Cooperative Extension Office
1031 S. Mt. Vernon Ave.
Bakersfield, CA 93307

TIME: 8:00 AM – 11:30 AM

COST: \$25 Pre-registration; \$30 at door

WHO: Anyone who diverts more than 10 acre-feet of water annually



Senate Bill 88 requires that all water right holders who divert more than 10 acre-feet a year measure and report the water they divert. For diversions greater than 100 acre-feet, SB 88 requires installation and certification of measurement methods be approved by an engineer, contractor, or other professional. AB 589 provides a self-certification option (AB 589 (Bigelow) - Water diversion: monitoring and reporting training). AB 589 allows a water diverter who has completed a course on measurement devices and methods administered by the University of California Cooperative Extension and passed a proficiency test to be considered a “Qualified Individual”. While this course was specifically developed for water diverters who divert more than 100 acre-feet of water each year, the course has proved helpful for anyone who is required to report their water diversions under SB-88.

At the workshop you will:

- Clarify reporting requirements for ranches.
- Understand what meters are appropriate for different situations.
- Learn how to determine measurement equipment accuracy.
- Develop an understanding of measurement weirs.
- Learn how to calculate and report volume from flow data.

These trainings will move fast and will include a proficiency test. Bring a clipboard and a hand calculator. We encourage family/staff member’s attendance. You can register online at <http://ucanr.edu/ab-589>.



University of California

Agriculture and Natural Resources | Cooperative Extension

Complying with SB88 - Water Measurement and Reporting Short Course October 23, 2018

LOCATION: UC Cooperative Extension Office
1031 S. Mt. Vernon Ave.
Bakersfield, CA 93307

TIME: 8:00 AM – 11:30 AM

COST: \$25 Pre-registration; \$30 at door

WHO: Anyone who diverts more than 10 acre-feet of water annually



NAME: _____

ADDRESS: _____

DAYTIME PHONE: _____ **NUMBER ATTENDING:** _____

EMAIL: _____

Morning refreshments will be provided.

Registration is also available online at: <http://ucanr.edu/ab-589>

Please make checks payable to **UC Regents**

Mail this form with payment to: UCCE Kern County
1031 S. Mt. Vernon Ave.
Bakersfield, CA 93307

Questions? Call 661-868-6200

The Roundup

Livestock and Range
Newsletter
Kern, Tulare, and Kings

University of California
Agriculture and Natural Resources

In this issue:

- Information on Virulent Newcastle Disease
- The Case of the Druggie Chickens
- Beef Cattle Market Relationships
- Information on the UC Davis Backyard Egg Study
- AB 589 Short Course for Water Diverters

Current Resident or:

Phone: (661) 868-6200
Fax: (661) 868-6208

University of California
Cooperative Extension
1031 S. Mt. Vernon Ave.
Bakersfield, CA 93307

