**Timely Tips**

*Dr. Roy Burris, Beef Extension Professor, University of Kentucky*

**Spring-Calving Cow Herd**

- Bulls should have a breeding soundness evaluation (BSE) well before the breeding season. They should also receive their annual booster vaccinations and be dewormed.
- Improve or maintain body condition (BCS 5) of cows before breeding season starts, if necessary.
- Continue supplying a high magnesium mineral until daytime temperatures are consistently above 60 degrees F.
- Schedule spring of “turn-out” working in late April or early May—at the end of calving season and before the start of breeding season. Consult with your veterinarian about vaccines and health products for your herd. “Turn-out” working for the cow herd *may* include:
  - Prebreeding vaccinations
  - Deworming
  - Replacing lost identification tags
  - Sort cows into breeding groups, if using more than one bull
  - Insecticide eartags (best to wait until fly population builds up)

Turn-out working of calves may include:

- Vaccinate for IBR-PI3, Clostridial diseases and Pinkeye
- Dehorn, if needed (can be done with electric dehorner and fly repellent during fly season)
- Castrate and implant male feeder calves (if not done at birth)
- Deworm
- Insecticide eartags
• Choose best pastures for grazing during the breeding season. Select those with the best stand of clover and the lowest level of the fescue endophyte, if known. Keep these pastures vegetative by grazing or clipping. *High quality pastures are important for a successful breeding season.*
• Record identification of all cows and bulls in each breeding group.
• Consider breeding yearling replacement heifers one heat cycle (about 21 days) earlier than cows for “Head-start” calving. Mate to known calving-ease bulls.
• Begin breeding cows no later than mid-May, especially if they are on high endophyte fescue. Cows should be in good condition so that conception occurs prior to periods of extreme heat.
• If using **artificial insemination:**
  – Check the heard at least twice daily (early morning and late evening) to observe cows in heat (Confining cows to a limited grazing area will ease this chore.)
  – Use an experienced inseminator.
  – Make positive identification of cows and semen used. This will permit accurate records on date bred, return to heat, calving date and sire.
  – Good handling facilities and gentle working of the cows are essential.
• Observe breeding pastures often to see if bulls are working. Records cows’ heat dates and then check 18-21 days later, for return to heat.

**Fall-Calving Herd**

• Pregnancy check the cow herd. Remove open cows at weaning time.
• Plan marketing program for calves. Consider various options, such as maintaining ownership and backgrounding in a grazing program, or precondition and sell in a CPH-45 feeder calf sale.
• Initiate fly control for the cows when fly population builds up.

**Stockers**

• Control internal and external parasites.
• Keep calves on good pasture and rotate pastures rapidly during periods of lush growth. Manage to keep pastures vegetative for best performance.
• Provide mineral mix with an ionophore.
• Implant as needed.

**General**

• Seed warm season grasses this month.
• Harvest hay. *Work around the weather and cut early before plants become too mature. Harvesting forage early is the key to nutritional quality.* Replenish your hay supply!
• Rotate pastures as needed to keep them vegetative.
• Clip pastures to prevent seedhead formation on fescue and to control weeds.
You Could Have Heard a Pin Drop

Dr. Roy Burris, Beef Extension Professor, University of Kentucky

I was recently on a team with people from various land-grant universities which was reviewing the animal science department in another state. Our team also included one in-state person who was a leader in the cattlemen’s association and the chair of Farm Bureau beef committee. He was needless to say, a very astute person and was recognized as such.

We spent 4 days studying all facets of the department and reviewing its programs. On Friday (the last day) we presented our findings to the various groups and explained what we had observed and how we thought things could be improved. At this particular time, we were meeting with the faculty and the reports were being well received. When it was his time “Leo” (the cattle producer) started his comments. Everyone was eager to hear what Leo, as the in-state representative, would have to say. Leo stood up and spoke “I look around this room and I don’t know you people – most of you I have never seen before”. You could have heard a pin drop in the room when he said that!

Leo, as I said, was a very astute man so he plowed ahead. “I’ve spent a week listening to what you folks are doing and I’ve decided that you are the best kept secret in the state! You’re doing a great job but nobody in this state knows about it.” Everyone let out a sigh of relief but they knew that Leo had a valid point and he had driven that point home.

Our cattlemen and farmers don’t just want to know the Extension people; they would like to know the researchers and teachers – as well as knowing what’s going on in their home-state land-grant universities. They, like Leo, are sometimes in a position to help but need to be better informed. Sometimes folks might think that producers wouldn’t understand the basics of “discovery” research but they should understand the value of it. Surely, we can communicate that. I am reminded of the time Dr. Jamie Matthews and I were talking to our producers about “cutting-edge” research being done here in trace mineral nutrition. One producer said “I don’t understand all you were saying but I am glad to know that our university is involved in work at that level”. That’s important.

Another point that needs to be made here and that is that Leo was “blown away” by the work that was being done. He was just unaware of it. When it withstood the scrutiny of several out-of-state scientists, Leo was justifiably proud of what his state was doing. I’m going to bet that from now on Leo and his fellow cattle producers will be better informed of what’s going on in his home state. Not a bad idea. Maybe that review was beneficial after all.

The Veterinary Feed Directive-Changing the Way Producers Obtain Medicated Feeds

Michelle Arnold, DVM (UKVDL) and Darrell Johnson, Ph.D. (Executive Director-UK Regulatory Services)

The Food and Drug Administration’s (FDA) Judicious Use Guidance (GFI #209) provides two recommended principles regarding the appropriate use of antimicrobial drugs in feed and water. The first is to limit medically important antimicrobial drugs to uses in animals that are considered necessary for assuring animal health. These are uses associated with the treatment, control, and prevention of specific diseases rather than weight gain or feed efficiency. The second principle states that uses of medically important antimicrobials should have veterinary oversight or consultation. This will be accomplished by changing previously labeled over-the-counter (OTC) antimicrobials used in feeds to Veterinary Feed
Directive (VFD) drugs. VFD drugs are drugs intended for use in or on animal feed which are limited to use under the professional supervision of a licensed veterinarian. Soon, for a producer to obtain a feed or mineral containing a VFD drug (for example-chlortetracycline or “CTC”), a veterinarian must write a VFD order (similar to a prescription) for the feed mill to fill according to the drug label. Although the VFD requirements have been in effect since 2001, the FDA published a proposed rule in December 2013 described as a “user-friendly reorganization of the VFD rule” intended to improve the efficiency and practicality of veterinary oversight. The comment period ended on March 12, 2014 and was scheduled to be finalized April 2015. All guidelines are currently planned to take effect approximately December of 2016.

Medically Important Antimicrobials with Current Feed and Water Labels

a. Aminoglycosides-Gentamicin, Neomycin
b. Lincosamides-lincomycin
c. Macrolides-tylosin, erythromycin, tilmicosin (Pulmotil® already requires a VFD in both swine and cattle)
d. Penicillin (natural)-Penicillin G included in combination products
e. Streptogramins-virginiamycin
f. Sulfonamides-sulfamethazine, sulfaquinoxaline
g. Tetracyclines-chlortetracycline (aureomycin), oxytetracycline (terramycin), tetracycline
h. Phenicols-florfenicol

Antimicrobials Not considered medically important

a. Ionophores-monensin (Rumensin®), lasolocid (Bovatec®)
b. Flavophospholipol-bambermycins (Gainpro, Flavomycin)
c. Bacitracin
d. Pleuromutilins-Tiamulin (Swine)

Who can write a VFD order? As the regulation is written, a licensed veterinarian can issue a VFD if the following criteria are met:

a. The VFD order is for animals under his or her “supervision or oversight” in the course of his or her professional practice;
b. The veterinarian is in compliance with all applicable licensing and practice requirements (as determined by state licensing boards in cooperation with state veterinary associations).

The new regulation removes the explicit VCPR (Veterinary-Client-Patient relationship) provision. The FDA did clarify that “licensed” means licensed in the state in which the animals reside.

Changes were also made to the VFD regulation in order to keep the current feed mill distribution system working smoothly. Medications mixed in feed are broken into Category I or Category II drugs. Category I drugs require no withdrawal period at their lowest continuous-use level for all approved species. Category II drugs do require a withdrawal period and feed manufacturers that use the most concentrated forms of these drugs (Type A) must register annually with the Food and Drug Administration. The old regulation stated that any VFD drug is automatically considered a Category II drug requiring a medicated feed mill license (MFML) to have access to the Type A medicated article. However, this new regulation states that Category I drugs can become VFD drugs. This allows unlicensed feed mills to continue to have access to Type A medicated articles they currently use after these drugs change from OTC to VFD status.
What information goes on the VFD form? Some changes have been made with the new regulation to simplify the VFD order form. The new requirements for the form include:

1. Veterinarian’s name, address, and phone number
2. Veterinarian’s license number and state where issued
3. Client’s name, address, and phone number
4. Premises/Location where animals are being treated
5. Species and production class
6. Number of animals being treated with medicated feed
7. Animals’ identification numbers and descriptions [No longer required to identify specific animals]
8. Animals’ age, weight
9. Date the VFD order is issued and expiration date of order-[Regulation now allows the veterinarian to issue a VFD order authorizing access to the drug for up to 6 months for a specific disease etiology (except when expiration is specified on the label)].
10. Name of VFD drug and its approved indications for use
11. Level of drug in the feed and duration of use [No longer required to calculate the total quantity of feed required]
12. Withdrawal time
13. Any special instructions and caution statements
14. Number of refills (reorders) permitted by the drug’s approval regulation (if any)
15. The following statement (verbatim): “Extra-Label use (i.e. use of this VFD feed in a manner other than as provided for in the VFD drug approval) is Strictly Prohibited”.
16. An affirmation of intent to combine VFD drugs with other drugs (for example, if using Rumensin (monensin) in the VFD feed, must include this information).
17. Veterinarian’s electronic or written signature
18. Any other information the veterinarian deems appropriate to identify the animals specified in the VFD

Once completed, a copy of the VFD order must be kept by the veterinarian, the feed mill and the producer for one year. Verbal communication of a VFD is not allowed but electronic or hard copies of the order are acceptable.

Why is veterinary oversight necessary? Developing strategies for reducing antimicrobial resistance is critically important for protecting both public and animal health. Collaboration involving the public, the public health, animal health, and animal agriculture communities is needed to assure that the public health is protected while also assuring that such strategies are feasible and that the health needs of animals are addressed. It is critically important to remember the benefits of using antibiotics in food animal production and the adverse effects that would result from their removal. Prior to 1993, most drugs given in feed and water were approved for over-the-counter use. At that time, the methods used by FDA to assess food safety aspects of new animal drug applications were not as rigorous as those used today, in part because less scientific data was available about the public health ramifications of antimicrobial resistance. However, as time passed and data has accumulated, all antimicrobial new animal drugs for use in food-producing animals approved by the FDA Center for Veterinary Medicine (CVM) since 1993 have been labeled with prescription (Rx) or VFD marketing status, with the exception of generic copies of existing over-the-counter (OTC) products. This shift to requiring veterinary oversight was viewed as an important
step to slow the food safety risks potentially caused by the use of new animal drugs, particularly for those drugs considered to be medically important. Based on the available scientific evidence, FDA believes that the judicious use of medically important antimicrobial drugs should involve the scientific and clinical training of a licensed veterinarian. This is because “judicious” use involves accurately identifying bacterial disease that is present or likely to be present and selecting the most appropriate antimicrobial drug. Veterinarians are uniquely qualified to determine which specific disease-causing organisms are likely to be present and to determine appropriately timed administration of medication relative to the disease. The decision to use a specific approved drug or combination drug is based on factors such as the mode of antibacterial action, drug distribution in specific tissues, and the duration of effective drug levels at the site of infection. In the case of prevention, judicious use includes the ability to consider all relevant factors in order to determine the risk of developing a specific bacterial disease. However, it is important to remember that VFD drugs used in any fashion different than stated on the label (drug level, species, or indications for use) is prohibited by law for veterinarians and producers alike.

Hauling Pregnant Cows

Dr. Steve Boyles, OSU Beef Extension Specialist

Sarah Fields and George Perry from South Dakota State University published a paper presenting the effects of stress on embryonic mortality in cattle. Shipping cows between days 5 and 42 causes around a 10% decrease in pregnancy rates. Research has also demonstrated that shipping cattle 45 to 60 days after insemination can result in 6% of embryos being lost. The following table demonstrates how transporting cows at different days after insemination affected pregnancy rates.

Effect of time of transport after insemination on pregnancy rates

<table>
<thead>
<tr>
<th>Days after insemination that transportation occurred</th>
<th>1 to 4</th>
<th>8 to 12</th>
<th>29 to 33</th>
<th>45 to 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synchronized pregnancy rate</td>
<td>74%</td>
<td>62%</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>% pregnancy loss compared to transportation on days 1 to 4</td>
<td></td>
<td>12%</td>
<td>9%</td>
<td>6%*</td>
</tr>
<tr>
<td>Breeding season pregnancy rate</td>
<td>95%</td>
<td>95%</td>
<td>94%</td>
<td></td>
</tr>
</tbody>
</table>

*Loss compared to percent pregnant prior to transportation (pregnancy determined by transrectal ultrasonography)
Data adapted from Harrington et al, 1995 and Merrill et al., 2007

Blastocyst formation, hatching, maternal recognition of pregnancy and adhesion to the uterus take place during this early time of pregnancy. If any of these time points are disturbed, then the result leads to increased embryonic mortality and decreased pregnancy rates. So . . . . . . . . .

When to haul pregnant cows: Days 1 to 4 or days 45 to 60
When to NOT haul pregnant cows: Days 6 to 42
Here is a link to the Factsheet: [https://www.sdstate.edu/vs/extension/beef/upload/ExEx2063_Shipping-and-Heat-Stress-on-EM.pdf](https://www.sdstate.edu/vs/extension/beef/upload/ExEx2063_Shipping-and-Heat-Stress-on-EM.pdf)
Feeder cattle markets continue to show strength with most 2015 CME© contracts in the $215-$220 range at the time of this writing. The August contract has generally traded in a range of $210 to $220 since early March and is near the top of that range now. Locally, calf prices have also held well, but tend to fall seasonally as we transition from spring to summer. It will be very interesting to see how this market behaves this summer.

Seasonally, the fed cattle market tends to drop from April to June and as that happens there may be a tendency for fed cattle prices to pull feeders with it. The fed cattle market has been in the low $160’s the last few weeks with June CME© Live Cattle futures in the mid-$150’s. This discount was actually much higher a few weeks ago, which suggested traders are expecting a smaller summer drop at the present time. Conversely, the August CME© Feeder Cattle Futures contract is trading roughly at par with the current CME© Feeder Cattle Index. Typically, one would expect slightly better prices for heavy feeders in late summer.

I talked a lot last year about decreased cow slaughter and what a driver that was for cattle numbers coming into 2015. I thought it might be good to re-visit that discussion at this point in the year. The chart below is compiled by the Livestock Marketing Information Center and shows continued lower cow slaughter in 2015. The same is also true for heifer slaughter so far this year as compared to 2014. And remember, female slaughter was very low in 2014, so the decreases we are seeing are from a small base. Obviously it is still early in the year, but both factors point to continued growth in the cow-herd as we starting looking towards 2016.