



# Sunflower Supreme Gazette

Volume 1, Issue 1

November 2013

## Special points of interest:

- Nutrition for growing heifers
- Enrollment and BQA information
- Vaccinations
- Record keeping tips
- Evaluating your heifers
- Persistently infected BVD

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## 2 Questions: The Foundation of Replacement Heifer Nutrition

*Dr. Justin Waggoner, Associate Professor, Beef Systems Specialist, Kansas State University*

Replacement heifer development requires a significant investment of labor, feed, and financial resources and is an essential component of any operation. Nutrition plays a vital role in the development of beef heifers, particularly the onset of puberty. Developing heifers to achieve 60-65% of their expected mature body weight by the beginning of their first breeding season is often recommended to ensure that heifers have achieved sufficient body weight and condition to achieve puberty. In order to build a proper nutrition program for replacement heifers there are 2 fundamental questions “What is the expected mature weight of your heifers” and “What do your heifers currently weigh” The response to these questions drives the nutrition program from weaning to breeding for replacement heifers (“Where are we at” and “Where do we need to be”). The average body weight of the mature cows in a herd or the replacement heifer’s dam is often used as the best indication of a heifers expected mature body weight. However, mature cows are not commonly weighed on many operations and therefore replacement heifer target weights may be under or over-estimated. Over-estimating mature weights can result in heifers that are

over-conditioned at breeding and increases feed costs. Under-estimating mature weights can result in lower rates of gain and may delay the onset of puberty in some circumstances. In 2010, I used the K-State Focus on Feedlot database to estimate mature cow weights in the U.S. using steer market weights from 1990 to 2010. The estimated mature weight of a beef cow was 1228 lbs in 1990 and 1386 lbs in 2010 (an increase of 158 lbs). Therefore, if you do not routinely weigh your cows, I would encourage you to take the opportunity to run a few cows across a scale.

The second question “How much do your heifers currently weigh?” determines the expected daily gain required to achieve the target body weight at breeding. If we know a heifer needs to gain 400 lbs in 200 days, then the heifer has to gain 2.0 lbs/day.

The current weight of the heifer is also used to estimate daily dry matter intake, which essentially serves as the foundation for the nutrition program. In an ideal situation, replacement heifers should be weighed at least 2 times during the development period. At the beginning and at approximately 90 days prior to the expected breeding season; the second weight prior to the breeding season provides the opportunity to change the nutrition program if necessary.



## Let's Talk

*Delta George, Ag Agent, Southwind Extension District*

Teamwork and a solid working relationship is a great start to any new endeavor, and the Sunflower Supreme program is no different. With open communication, sharing of goals, and cooperation between producers and Extension Agents we have a unique opportunity to not only get Sunflower Supreme off to the right start – but to build a sustainable and lasting program.

Collaboration between K-State Research and Extension, Kansas Department of Ag, and Kansas State University College of Veterinary Medicine worked to get this program started on a state-wide level. Now producers and agents have the opportunity to build closer working relationships and

establish open communication to be sure all Sunflower Supreme requirements are met and protocols followed in a timely fashion. Local Extension staff can be reached via phone, email or a simple visit to the office.

Remember, this is a pilot program and we recognize there is still much to learn from Sunflower Supreme. That is why we encourage producers to share their goals, questions, concerns and successes with your local Extension Agents. As the educational link to Kansas State University, Extension Agents can provide you with many resources to ensure your cowherd has increased revenue, improved reproductive success and greater heifer longevity through participation in the Sunflower Supreme program.





**“Replacement heifers are the future of your cow herd, so proper selection based on genetic and visual appraisal are necessary for continual forward progress”**

## Enrollment Positive for Sunflower Supreme Program

Producer enrollment in the Sunflower Supreme Program is strong for spring-calving operations. Producers from twelve different counties have enrolled in the program.

Most producers have completed Beef Quality Assurance training, but for those who have not completed the training as of yet, please do so. Directions for training modules can be located at [www.sunflowersupreme.org](http://www.sunflowersupreme.org) and are also described in detail in this short article.

On-line training can be completed at [www.animalcaretraining.org](http://www.animalcaretraining.org) or can be assessed from the Sunflower Supreme Website under the “important links” tab.

This Animal Care Training website is managed

by Kansas State Universities Beef Cattle Institute. On the homepage of the animal care training website, click on the tab titled training modules. Then click on the link titled “Beef Quality Assurance”. This directs you to the different training modules. The minimum module to complete is Cow-Calf BQA.

A video walking you through this process can be assessed online at [sunflowersupreme.org](http://sunflowersupreme.org) under requirements. Another video walking through the method of collecting your BQA number from the trainings offered this fall is found at the same online location.

The Sunflower Supreme directors are working on scheduling additional BQA trainings during 2014 in the hopes that all producers can have access to trainings.

## Considerations When Selecting Replacement Heifers

*Keith Martin, Livestock Agent, Wildcat District*

When selecting replacement heifers it is a good idea to practice the second habit in Stephen Covey’s book “Seven Habits of Highly Effective People” which is “Begin With the End in Mind”. Ideally replacement females will produce a marketable calf every 365 days and do so with a minimum of purchased inputs.

Most producers would agree that successful replacements:

- Reach puberty and become pregnant early in the first breeding season
- Calve unassisted each year
- Breed back early with high levels of sustained fertility thereafter
- Have the right combination of milk and fleshing ability, to wean profitable calves, yet maintain sufficient body condition for early annual re-breeding
- Have sensible maintenance requirements as a result of mature size and milk production levels which are matched to available feed resources

- Have sound teats, udders, feet and legs as well as calm temperament and as much longevity as possible to minimize annual replacement rates
- Represent genetics for optimum levels of growth, efficiency and carcass merit for the purpose of producing profitable feeder and fed cattle as well as replacements

The genetic makeup and body type of the females that meet the above stated goals will not be the same on all operations due to variations in forage resources, climate, market for calves produced, and other management objectives of the producer. In spite of that variability there are some common traits that should be considered when selecting replacement females.

**Weaning** - The first opportunity to make selections for potential replacements usually occurs at weaning. It is a good idea to keep back at least ten percent or more replacements than you will ultimately need. Weaning provides an opportunity to remove from consideration those females which are lower performing, off type or have structural concerns.

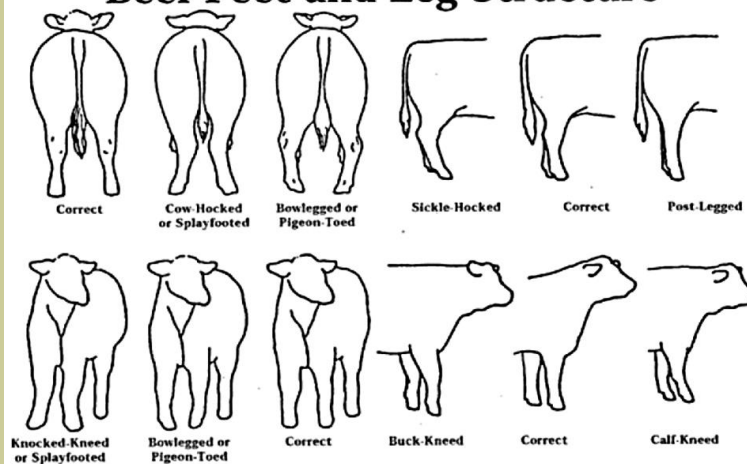
When evaluating structural soundness work from the ground up. The figure to the left displays some common structural faults in cattle.

Not all structural defects are the same when it comes to predicting longevity, for example, post legged, buck kneed and pigeon toed, all have a more negative effect on longevity in the herd than sickle hocked and cow hocked.

Those heifers which are from cows that consistently calve early, unassisted should be given strong consideration to be kept, as well as those females from sires that have acceptable growth and milk EPDs and can contribute heterosis.

Weaning is also a good time to evaluate disposition and remove those females from consideration which do not fit your criteria.

### Beef Feet and Leg Structure



## Record Keeping Help

*Dr. Jaymelynn Farney, Assistant Professor, Beef Systems Specialist, Kansas State University*

For some producers this program will increase their need for record-keeping tools. One of the first records that are needed to be kept include vaccination timing, dosage, and injection techniques. The paper is titled Weaning and Booster Vaccination Sheet (#2). Within your producer packets this sheet is included in a 3-carbon copy format. Fill out the sheet according to the directions and then turn one copy in to your extension agent and keep the other two copies for your records. Since there are two copies left after you have filled out the sheet, use one copy for your records, and the other copy can be used to market the remainder of your cattle. This provides documentation that buyers would be interested in and provides you with an additional marketing opportunity. Gone are the days where producers can be passive about their cattle when it comes to marketing, so if you have documentation that you did proper health protocols on your cattle, use this to advertise your exceptional animals. The Weaning and Booster Vaccination Sheet (#2) can also be found in the documents tab on sunflowersupreme.org website. The form found online is a fill-in PDF format so you can use this form to provide marketing advantages for all your cattle, be they heifers, bulls, or steers.

Another helpful record keeping suggestion

includes writing the bangs tag number somewhere on your visual tag. Since the bangs number is an individual animal identification that will be used throughout the program to keep track of all procedures done in accordance with the program. A large visual tag helps with sorting and pasture identification of heifers, so all heifers should have a visual tag in addition to their bangs metal tag. The purpose of writing that bangs tag number of the visual tag will decrease the time spent catching the heifer, cleaning the metal clip, and then trying to have the heifer stand still long enough to read the numbers.

There are several locations that you can write this number. You can potentially write the number under the large individual heifer number or on the backside of the visual tag. Illustrations of both methods are shown in this document. The numbers can be written by using a tag marker, that most of your feed and vet companies carry.



**“Record keeping and vaccinations are key to the success of developing ALL replacement heifers”**

## Vaccinations For Heifer Health

*Dr. Jaymelynn Farney, Assistant Professor, Beef Systems Specialist, Kansas State University*

Remember that success of this program involves best management techniques in regards to health. Subsequently, there are several important pathogens that need to be vaccinated against. This is a reminder about the pathogens that are required to be protected against at weaning and booster.

These vaccination guidelines are designed to protect against both respiratory and reproductive issues. Respiratory protection is important to minimize costs associated with production via antibiotic costs and potential decreases in gains that might negatively impact breeding success. Protection against reproductive pathogens should minimize abortion losses.

The vaccine label will tell you which pathogens are included in the vaccine, along with the specific species, serovar, or type. This becomes important in regards to making sure that requirements are met in regards to two type of BVD and 7-way vaccines for a specific genus. It is also important to read the label for correct vaccination techniques, amount to administer, pre-cautions

and warnings. Reading the vaccine label is possibly the most important step in working cattle.

It is important to work with your veterinarian to develop a whole-herd health program that involves determining timing and type (modified live versus killed vaccine). These are important to understand and schedule because of potential abortion causing agents by cross-vaccinating with different types of vaccines.

### Pathogens to protect against:

- **BRSV: bovine respiratory syncytial virus**
- **IBR: infectious bovine rhinotracheitis**
- **PI-3: parainfluenza-3 virus**
- **BVDV: bovine viral diarrhea virus**
  - Types I and II
- **Lepto: leptospirosis**
  - 7-way. Most common abortion serovars include hardjo and Pomona and need to be included in mix
- **Vibrio/Campy: campylobacter fetus (pathogen) aka Vibriosis**
- **Clostridial: 7-way to protect against blackleg and enterotoxemia**



**Gathering cattle for weaning protocols**

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UNIVERSITY**

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The purpose of this program is to provide cattle producers “best management” guidelines for replacement heifers and provide educational opportunities for improvements in revenue, reproductive success, and longevity within their cattle operation.

*Knowledge  
forLife*

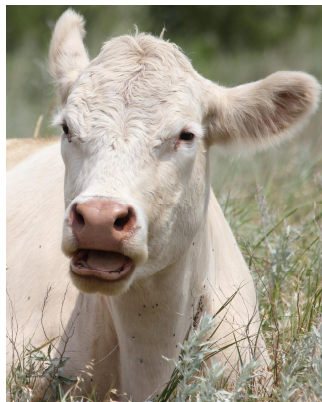


The Sunflower Supreme Program initiated in 2013 with 28 counties in the Southeast Corner of the state. The program was developed with help from Kansas Department of Agriculture, commercial and registered cattle producers, veterinarians, and help from Missouri Extension Service. Guidelines are research-based and can be implemented on any cattle operation.

### Vet’s Talk—BVD-PI: What is it?

*Larry C. Hollis, D.V.M., M.Ag.  
Extension Beef Veterinarian  
Kansas State University*

You have probably heard the term BVD-PI thrown around or in the cattle media, but really do not know the significance of this term to your operation. The term refers to a form of Bovine Viral Diarrhea (BVD) infection which results in persistent shedders animals that can either be purchased and added to your herd or developed in breeding-age females in your herd. The **persistent** form is in stark contrast to the **acute** form, where the acute form infects an animal and either kills the animal or the animal’s immune system clears the infection after several days (just like a human getting over the flu). The persistent form (called PI for short) develops only when a pregnant cow is exposed to an animal that is shedding the virus (either an acutely infected or persistently infected animal). If the developing fetus inside the pregnant ani-



“Chewing” the cud with your state veterinarian

mal is between 45-125 days of gestation at the time of the dam’s exposure to the virus, the fetus’s newly developing immune system may think the virus is one of its’ normal body cells and will start reproducing the virus alongside its’ other body cells. If the calf is born alive, it will produce large quantities of BVD virus and pass them in every wet secretion that comes out of its’ body for the rest of its’ life. Thus, it becomes

a lifetime shedder of BVD virus which is capable of infecting all cattle it comes in contact with. Vaccination will not clear this shedder status. The only way to clear shedders from your herd is to find the PI animals and remove them from your herd. The only way to find out whether BVD-PI animals exist in your herd are to have your veterinarian test for the presence of the disease. This involves taking an ear notch sample and submitting it to the Veterinary Diagnostic Laboratory for testing. The testing is highly accurate and the turn-around time is short. You should test all existing breeding stock and potential replacement animals before adding them to your herd. Once animals have tested negative they cannot become PI, although they can become acutely infected as described above. Once you know you have a negative herd, a good BVD vaccination program will help prevent future pregnancies from producing BVD-PI animals.