Choosing a Calving Date

One of the most important decisions a cow-calf producer must make is choosing a calving date. This decision must take into account the entire beef production system, environmental conditions, available resources and production and lifestyle goals. Calving season influences when other production events occur, such as peak lactation, rebreeding, weaning and marketing, all of which affect an operation’s profitability and efficiency.

- Any calving system, regardless of date, should address the relationship between nutritional requirements of beef females and the quality and quantity of available feed. Nutritional status of beef females is influenced by stage of production and the environment, including length of growing season, forage species, day length, topography, forage quality and availability, ambient temperature, annual rainfall and weather extremes.

- Periods of growth, gestation and milk production each influence nutrient requirements for the growing and adult female. The relatively high nutritional requirements of cows in late gestation and early lactation can affect subsequent reproductive performance in limited nutritional environments.

- Operations with available high quality feed resources and minimal environmental stress can sustain larger cow size and greater levels of milk production for increased economic returns. But under conditions of low feed availability and greater environmental stress, cow size and milk production should be limited.

- *Bos indicus*-influenced genetics has introduced a more heat-tolerant animal suited to perform in the hot, humid environment of the south-eastern United States. Additionally, some beef producers in the Southeast choose a calving and breeding season when ambient temperatures are lower and extreme weather is less likely to disrupt breeding or create environmental stress during calving.

- Most spring-calving production systems have historically marketed cattle in November, resulting in a high calf supply. An increased supply at this time results in a lower price when compared with calf prices in winter or spring. Calves sold at an alternative time to November generally receive a higher price because of decreased supply at weaning and marketing. A higher price received must offset the potential added cost of harvested feeds needed to support an alternative calving system.
Pregnancy Checking Provides Management Options

Checking cows for pregnancy is nothing new, yet its adoption rates are still incredibly low. According to the 2008 United States Department of Agriculture (USDA) survey on cow/calf management practices in the U.S., only 18 percent of all operations and 58 percent of operations with 200 head or more check cows for pregnancy status. The USDA is currently conducting an update to this survey. My hope is that we see adoption rates for this practice increase because there are many benefits to pregnancy checking and multiple options available to do so.

Knowing the pregnancy status of the cow creates additional management options. It essentially gives us a glimpse into the future so that management options can be analyzed and implemented now rather than several months from now. Maintaining an open cow for a year is rarely a sound decision. An open cow can be sold, retained as a stocker cow, or transitioned to a different calving season such as spring to fall. This knowledge allows the producer to make the best management decision given current market conditions. Without this knowledge, the producer is forfeiting a large amount of management control and potential profit.

Other potential benefits based on the method chosen are the ability to sort early calvers from late calvers, determine sex of the calf, identify reproductive abnormalities and provide time with your veterinarian to discuss overall herd health. The latter benefit may become more important for some individuals as the need for a veterinary feed directive goes into effect for some products in 2017.

There are three very good options for determining pregnancy in females: 1) rectal palpation, 2) ultrasound and 3) blood testing.

Rectal palpation is likely the most recognized method by producers. It gives immediate results so that animals can be sorted out of the chute. Accuracy of this method is generally very high at 45 to 60 days post-breeding. A downside is that the skill level of the technician must be accounted for.

Ultrasound is another method and displays higher accuracy slightly earlier at 28 to 35 days post-breeding. It also gives immediate results so that animals can be sorted out of the chute. In addition, this method gives the ability to determine sex of the calf.

Both rectal palpation and ultrasound allow the technician to physically evaluate the reproductive tract and estimate age of the fetus.

Another method is the BioPRYN blood test. This method essentially removes the variable of operator skill level. The test's ability to detect open females is 99 percent accurate, and its ability to detect bred females is 95 percent accurate. The blood must be drawn at least 28 days post-breeding and 75 days post-calving. The biggest advantage is the ease in which producers can learn to pull blood themselves and perform the test as their schedule allows. Downside of the test are that all females must be individually identifiable. Since the blood must be tested, sorting out of the chute is not an option. Results are generally available within a couple days. Knowledge gained from this test is more limited than rectal palpation and ultrasound. It simply reports a female as bred or open.

The three methods are generally competitive in price. The most important thing is that producers determine what information they want to ascertain through pregnancy checking, then choose the method that provides this information while being logistically feasible.
Jar Test Helps Determine Compatible Chemical Mixes

I'm often asked if certain pesticides can be tank-mixed, or if they will mix with liquid fertilizer. Many are compatible, but some are not. There are two types of incompatibilities. One is chemical incompatibility. When this happens, the resultant mixture will cause chemical degradation of one or all materials in the mixture, which will result in poor efficacy of the products. For example, if you mix two herbicides that are chemically incompatible, you are likely to encounter poor weed control. The pesticide label should inform the user on what products are chemically compatible.

A more common compatibility problem is physical. When two or more products are physically incompatible, an emulsion may form. This results in a mayonnaise-like substance in your tank that is very difficult to get out. Obviously, you want to avoid physical incompatibility. Usually, the label says to conduct a "jar test" to determine if products will mix. Following is a description of how to do a jar test from Utah State University Extension.

First, get a quart-sized jar with a sealable lid. Add 1 pint of the carrier you plan to use (water or liquid fertilizer). If water is your carrier, be sure to use the same water source that will go into the spray tank. Add the materials and rates you plan to use to the carrier in the following order: water soluble pouches (1 tablespoon), wettable powder (1 tablespoon), dry flowables (1 tablespoon), capsule suspensions (1 teaspoon), emulsifiable concentrates (1 teaspoon), soluble liquids (1 teaspoon), soluble powders (1 teaspoon) and surfactants (1 teaspoon). Seal the jar with the lid and shake vigorously after each addition. You will almost never use all these types of products at one time, so choose the ones you will use and add them to the jar in the order and amounts listed.

For example, let's say you want to spray a combination of liquid fertilizer, 2,4-D amine and Cimarron Plus. Since liquid fertilizer is the carrier, add 1 pint to the jar. Cimarron Plus is a dry flowable (formulation can be found under the "Product Information" section on the label), and 2,4-D amine is a soluble liquid. Following the order in the preceding paragraph, add 1 tablespoon of Cimarron Plus into the jar, seal and shake vigorously; then add 1 teaspoon of 2,4-D amine, seal and shake vigorously; then add 1 teaspoon of surfactant, seal and shake vigorously. Let the solution stand 15 minutes after the last shaking. Shake again and observe the results.

If the materials are physically compatible, the jar will be cool to the touch and there will be no separation of materials or forming of clumps or emulsions. If the mixture is incompatible, the jar may be warm or hot to the touch; layers may form in the mixture; or sludge, clumps or grains may form in the mixture. If the mixture is incompatible, either do not use that group of products together or re-do the test with a compatibility agent to see if that aids in making the mixture compatible.

After the test is complete, pour the contents of the jar into the spray tank (if it is compatible), triple rinse the jar, add the rinsate to the spray tank and throw the jar away.

Always conduct this test when mixing pesticides together. I have heard many stories from people who mixed Brand X and Brand Y together many times with no problems then had a foul-up with the same products and had to clean out their tank.

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**Pesticide Applicator Training (P.A.T.)**

**Restricted Use Pesticides**

Two (2) PAT certification/recertification training classes have been scheduled for Garland County. The first will be held on Monday, November 7 at 5pm prior to the Cattlemen’s Meeting at Pleasant Hill Baptist Church (off Hwy. 70, across from Davis-Smith Funeral Home). The second one will be held on Tuesday, January 24 at 6pm at the Extension office at 236 Woodbine St., in Hot Springs. It will not be necessary for you to pre-register, all you need to do is show up for either one. The cost for this training is $10 payable by check (no cash please) and your check needs to be made out to Garland County Extension Service. Give your check to the training instructor at the time of the training. REMINDER—If you cannot attend either of these sessions due to scheduling conflicts, there are other PAT sessions going on in other nearby counties.

Go online to review a complete list of dates and locations. You’ll find this information by visiting http://www.uaex.edu/farm-ranch/pest-management/education-licensing.aspx and selecting “Private Applicator Training Sessions”.

Keep a Pesticide Record—REMEMBER—records must be kept on Restricted Use Pesticides for 2 years. State Plant Board Representatives conduct random checks on records to ensure users are in strict compliance with the regulations that are set forth.
Brucellosis Vaccination Time
It’s time to schedule Brucellosis Vaccinations. The deadline to register your heifers for this year is Friday, October 4 at 4:30 pm. A state technician will vaccinate your heifers, ages 4 to 12 months old at no cost to you. Remember: We no longer send out the ‘yellow’ cards for you to return. You only need to call here at our office anytime between now and October 4 to get them registered. Your name will be added to our list and once the deadline has passed, you will then receive a confirmation letter just prior to the vaccination schedule giving you the exact date and time. You must provide good facilities and assistance to the technician. There are currently no penalties for not vaccinating heifers, but it weakens our guard against BANGS disease. If you know of others who may have heifers in need of vaccinations, inform them of this service and ask them to call our office to sign up. Remember, please call 623-6841 by Friday, October 4 to register.