

Fertilizer is Key for Cotton Production

Fertilizer amounts, application methods and timing of the applications will all be critical decisions in this coming year's crop. With the increase in fertilizer costs, producers need to really analyze their fertilizer inputs. Also, fertilizer should be correlated with water availability. There is little need to fertilize heavily if irrigation capacity is limited. Producers should (1) Soil test and apply fertilizer according to realistic yield potentials. (2) Analyze application methods, knifing in liquid fertilizers could be more cost effective because you can reduce fertilizer rates by applying fertilizers close to the root zone as opposed to broadcast applications where you are fertilizing bare ground. (3) Split applications on Nitrogen, don't put all the Nitrogen out pre-plant. Provide Nitrogen at critical times of peak squaring, bloom, and boll set. I would even encourage dryland producers to split applications and base part of the Nitrogen inputs on moisture availability and yield potential. Below are some helpful hints on types of fertilizer and how they relate to the cotton plant:

Nitrogen-Base application rates on yield potential, soil type and management level. It usually takes 50-60 pounds of nitrogen to produce a bale of cotton. No one form, or source of nitrogen, is superior if all are applied correctly. Base choices on price, availability and ease of application.

Potassium-Potassium is essential for many enzyme systems in the cotton plant. Uptake of potassium increases during early boll set with approximately 70 percent of total uptake occurring after first bloom. Potassium deficiency symptoms appear as a yellowish-white mottling of the foliage and changes in leaves to a light yellowish-green color, with yellow spots appearing between the veins.

Phosphorus-Phosphorus stimulates early root development and early fruiting. Phosphorus is essential for such processes as photosynthesis and transfer of energy that takes place in the plant. Leaves that are reduced in size but remain dark green characterize cotton phosphorus deficiency. Delayed fruiting and maturity also may be symptoms. Remember, Phosphorus only moves 1-2" in the soil pro-

file per year and is slow to break down. Dry fertilizer applied this year will be utilized more by next year's crop than this year's crop.

Boron-Trace amounts of boron help the cotton plant reproduce. Boron also influences conversion of nitrogen and carbohydrates into more complex substances such as protein; it affects the transfer of sugars within the plant; and it influences cell division and aids in membrane formation.

Rolling Plains Cotton Producers Meeting

The 2018 Kent and Stonewall Cotton Producers meeting will be held April 6th at 12 P.M. at the Peacock Baptist Church Family Life Center. Come enjoy a steak dinner and listen to Gaylon Morgan, State Cotton Specialist, and Emi Kimura, District Agronomist, discuss topics concerning Rolling Plains cotton production. An Auxin training will also be offered. Please RSVP by April 4th at the Extension Office.

Prolapses in Beef Cows

Prolapses occur occasionally in beef cows. Most prolapses occur very near the time for calving. Two distinct kinds of prolapse exist.

1. Vaginal prolapses are those that occur in very late gestation. Vaginal prolapse is as the name implies, a protruding of the vagina through the vulva and exposed to sun, wind, and infectious pathogens. Vaginal prolapses are very repeatable. In other words, if the vaginal prolapse is repaired, the cow calves, and re-breeds, then she is very likely to prolapse again next year. This type of prolapse is known to have a genetic component, which means that daughters of cows that have this problem

will have an increased likelihood of suffering a vaginal prolapse themselves. Therefore, when the producer finds a cow with this malady, she should be marked for culling and daughters should not be kept as replacements. Certainly, bull calves from this cow could also pass the genetic characteristics on to his offspring and proliferate the problem within a herd.

2. Uterine prolapses occur at or shortly after calving. Many times, they occur with a difficult birth. The uterus is literally pulled through the birth canal with the calf or the after-birth and again exposed to the weather elements, potential injury, and certainly infectious

agents. Uterine prolapses, when repaired by proper veterinary attention, can have a very successful result. Cows with properly cared-for uterine prolapses are no more likely than others to have a prolapse next year. Because of the trauma, possible infection, and recovery time, cows with a uterine prolapse may take longer to re-conceive for the next year's calf. This often means that these cows will be late-bred or non-pregnant at weaning time when pregnancy checks are made. This may be a viable reason for culling these cows but keeping pregnant cows that have experienced a uterine prolapse, is not a bad risk.

Bull Fertility Management

Plan ahead and have your bull fertility tested this spring. Producers need to pay close attention to their herd sire. Remember, a cow that does not breed only loses the producer one calf, but an infertile bull could mean the loss of 20-30 calves, an economic disaster that few ranchers can afford. Producers should normally have their herd sires fertility tested by a veterinarian

45-60 day before breeding season begins, but it is never too late. The cost and time of the testing is relatively cheap compared to a whole calf crop. Many things can affect a bull's fertility, these include nutrition, bull maturity, overuse, environmental conditions, sexually transmitted diseases and many others. Watch the estrus cycles of your cows. If you notice a cow coming into heat

more than once, it might be the cow, or it could be your bull that has become infertile. Bulls can become infertile during the middle of the breeding season. Producers should also have the bull in good physical shape before the breeding season begins.

Bull Selection

A common mistake made by cow-calf producers is not placing enough emphasis on purchasing a bull. Too often producers view the bull as just another area of expense to be cut. However, due to the tremendous impact he has on the entire calf crop, the bull should be treated as an important investment for the cow-calf producer.

What tools do I use for the selection process?

The beef industry is continuously changing and introducing new technology to improve efficiency of production and product quality for the consumer. Selection tools are available to help with purchasing a bull:

- *Visual selection
- *Individual performance records
- *Expected progeny differences (EPDs)
- *Ultrasound measurements

Visual selection

Visual selection is the oldest standard in bull selection. It's often assumed that selection based on objective production data will replace the more subjective visual evaluation of cattle, visual selection shouldn't be taken lightly.

Structural correctness of feet and legs is absolutely necessary. It's the most critical component of visual selection because conformation is difficult to measure objectively.

Regardless of how great his performance data is, a bull that is unable to mount cows in heat has no value to the cow-calf producer.

Frame score, an estimate of skeletal size based on hip height and

age, is an effective measurement for estimating rate of maturity, mature size and general carcass composition at a given end point. Select well-muscled bulls to produce more muscular calves. The degree of muscling is important and relates to the amount of red meat yield the calf will have at harvest. Feeder calf quality is based heavily on muscling of the calf.

Choose a bull that is well-balanced from end to end and eye appealing because these traits are passed on to his offspring. Depth and capacity in bulls are also important because of their positive relationship to fleshing ability.

Performance records and EPDs

Individual sire performance data (birth weight, weaning weight, etc.) can help predict the performance of a sire's offspring. EPDs take that a step further and helps us make even more accurate predictions of how a group of a sire's offspring will perform. An EPD is the difference of an animal, when compared to other animals of the same breed or the breed average for that trait.

Don't compare the EPDs of bulls of different breeds unless specific adjustments are made to the figures.

Selection for one trait often affects other traits either positively or negatively.

Ultrasound measurements

Ultrasound technology can measure ribeye area, back fat thickness and percentage of intramuscular fat (marbling). Cow-calf producers who are paid for

the carcass quality of their calves should use this powerful tool. However, even if you are simply selling your calves at weaning, ultrasound ribeye area measurements can be used to more accurately select bulls with more muscling.

Use the available tools

Visual selection, performance data and ultra sound data are available to help select a bull. Use a balanced approach when evaluating genetic traits. Single trait selection can rapidly improve performance in one area while possibly reducing it in another. Select for traits that are valuable to your operation. Do you need more or less milk in your cows? Milk EPDs should be important. Do you sell calves strictly at weaning? Weaning weight EPDs should be the area of focus. Do you retain ownership and take cattle to the feedlot? Then yearling weight and carcass EPDs would be critical. Treat a bull purchase as an investment in your operation rather than merely another expense.

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