Pasture to Market

Providing beef cattle industry information for Louisiana cattle producers

July—August 2017

Managing First-Calf Heifers

- A heifer's worth today is equal to all her future earning (calf sales and salvage value), minus her annual expenses. Therefore, assuming a 1200 lb. cow with a life span of 8 years weaning a 550 lb. calf each year:

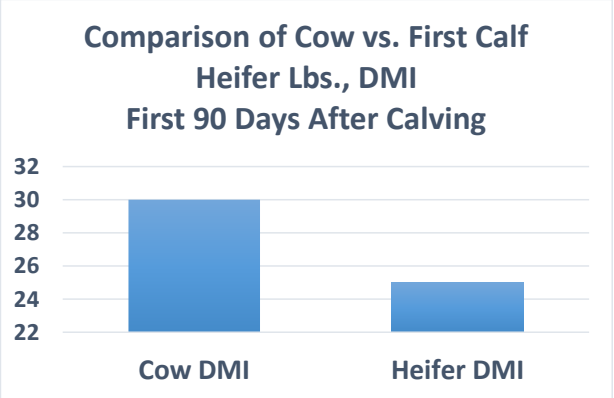
  ⇒ $6,238.32 (calf sales 550 lbs. X $141.78/cwt. X 8 yrs.) + $885 (salvage value 1200 lbs. X $73.69/cwt.) = $7,123.32 - $4,480 ($560 annual expense) = ***$2,643.32*** (this is what she's worth….not necessarily what one is willing to pay)

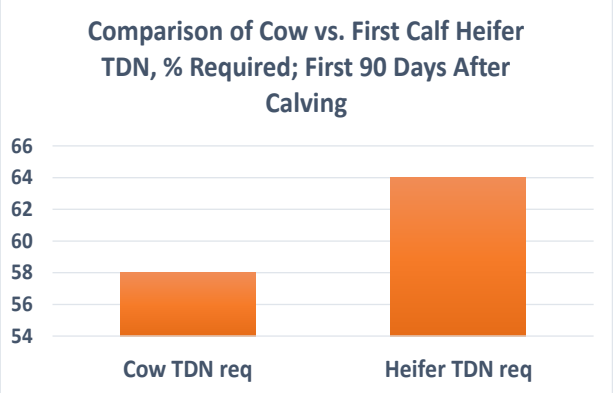
- Unless she's trained to do circus tricks, there are only two ways she is going to earn a living: produce beef or become beef.
- If she is going to make a career of producing beef, it is important that she wean a calf each year, and the odds of her coming up short on the rent are greatest when it is time for her to conceive her second calf.
- When a cow doesn't rebreed, the cost of keeping her for a year must be absorbed by the females that do wean a calf. If she conceives late in the breeding season (2nd estrous), her calf will lose 21 days of growth against a common weaning date. Either way, she's not living up to her profit potential.
- The first step towards doing her job year-in and year-out is that she must become pregnant again within 82 days of calving. (365 days in a year - 283 days average gestation period = 82 days to rebreed)

- Rebreeding is a first-calf heifer's lowest priority. She will use nutrients to stay alive first and to provide milk for her calf second.

  ⇒ Only after she reaches her genetic maximum for milk production and meets her requirements for maintenance and growth will she repartition energy for reproduction. When the body detects low energy levels, it shuts down the production of reproductive hormones.

  ⇒ She will not cycle again until blood energy levels are high enough to meet all her requirements. Low energy levels as a result of poor body condition at calving are generally the cause of re-breeding failure.





- Compounding the low energy problem is the fact that she just overcame the greatest physiological stresses of her life; fetal development, parturition, lactation and reproductive tract repair require a lot of energy!
- All 2-year-olds and some 3-year-olds are still growing themselves while providing milk for their calves. In the case of 2-year-olds, these young mothers are losing their baby teeth and are not yet good foragers. Therefore, many go into the breeding season with reduced intake.
- As intake falls short of the incredibly high energy requirements, she compensates by mobilizing the energy stored in fat. Over several weeks, a noticeable change in her appearance occurs. This change can be quantified by utilizing body condition scores (BCS).

Nutritional Management— Pre-Breeding

- Heifers should be bred at an estimated 65% to 70% of her mature body weight (You've heard it before….I'll say it again….scales are very important on a cow/calf operation).
- Example:
  - ⇒ Group A heifers expected to weigh 1,200 pounds as mature cows, and should weigh 780 to 840 pounds at breeding.
  - ⇒ The group is weaned on August 1st and will be bred on March 25th, leaving 237 days to reach the target weight. Determine the average daily gain (ADG) required over the 237 day period to reach target weight:
    - Heifers weaned at 550 pounds with a target weight of 810 pounds will need to gain a total of 260 pounds in 237 days. That results in an ADG of 1.10 pounds. This is easily obtained with diet consisting of 9% crude protein (CP) and 60% total digestible nutrients (TDN) @ 15 lbs. of dry matter intake (DMI).
- Weight gain should be monitored every 30-60 days to make sure the heifers are gaining on schedule, and make adjustments to the feeding program.

Nutritional Management— Gestation

- Heifers should be at an estimated 85% to 90% of their expected mature body weight at calving.
- Example:
  - ⇒ Group A heifers are expected to weigh 1,200 pounds as mature cows, and should weigh 1,050 lbs. at calving.
  - ⇒ The group is bred on March 25th at a weight of 810 pounds and are expected to calve on January 1st (283 day gestation), they must gain 240 pounds resulting in an ADG of 1.18 pounds. If we maintain a diet consisting of 9% CP and 60% TDN @ 19 lbs. of DMI, we should be able to achieve this weight gain goal.
  - ⇒ Separate heifers in good body condition (BCS 6) from those in poorer condition (BCS 3 and 4). Overfeeding can be avoided while allowing those that are thinner to add condition, increasing their potential milk production and re-breeding percentages.

Nutritional Management — Post-calving

- At the beginning of calving, heifers should be at a BCS of 6.
- Continue to provide adequate forage or feed resources consisting of 11% CP and 64% TDN @ 25 lbs. of DMI for the first 90 days after calving.
- Females that calve in thin body condition but regain weight and condition going into the breeding season do not re-breed at the same rate as those that calve with a minimum BCS of 6 and maintain it through the breeding season.
- Once a heifer has calved in a poor BCS (3 or 4), it is virtually impossible to feed her enough early in lactation to get her to increase BCS and to produce milk while continuing to grow. It is easier to increase body condition *before* calving.

BODY CONDITION RELATES TO INTERVAL FROM CALVING TO FIRST HEAT

BCS	Post-Partum Interval (Days)	
3	89	> 80
4	70	
5	59	> 55
6	52	
7	31	

Take home points:

- A bad idea….in an attempt to decrease calving problems, some producers allow heifers to lose body condition and calve at a BCS of less than 5 so the calf's birth weight will be lower. Producers should remember that heifers are still growing, have maintenance needs, have to battle environmental stresses and must produce milk for the first time. Therefore, there is no validity to holding back feed from heifers to make their calves smaller at birth.
- Reducing calving difficulty (dystocia) is an important strategy in maintaining rebreeding rates. Cattle suffering from dystocia experience 16% lower pregnancy rates during the next breeding season. Many calving problems can be eliminated if heifers are bred to *low birth weight bulls* and are 85% to 90% of their expected mature weight at first calving.
- Weaning calves at 4-5 months of age (early weaning), or earlier if cows are in dire straits nutritionally (i.e., drought) may provide young cows with 30-45 days of additional rest before their second calving. Very early weaning, 40 to 80 days of age, should be a last-ditch effort to keep the heifers in the herd. However, this decision creates an entirely different set of calf-management issues.
- Sometimes just reducing the calf's reliance on mama can be enough of a nudge for rebreeding. Removing calves for 48 hours has been shown to improve conception rates of moderately (BCS 5) conditioned cows by 4% - 8%. Short-term calf removal can be used at the first of the breeding season, in the middle or at both points in time.
- Creep-feeding or creep-grazing calves is another method to reduce the nutritional demands on first-calf heifers, enabling her to use more energy for rebreeding. Creep gates should be constructed so only calves have access to the feed/pasture. The mamas also like the high quality feed/pasture and will go to great lengths to get it.
- Remember, cows continue to grow until they are 4-5 years old. Nationwide, almost as many 3-year-olds come up open as 2-year-olds, so both groups should be managed with equal intensity and, if possible, as a single unit.
  - ⇒ Managing 2 and 3-year-olds together is better than mixing 3-year-olds with the mature cows because the younger cows frequently get pushed away from high quality forage/feed, which keeps them from paying their rent.

In Conclusion:

1. Graze first-calf heifers and mature cows separately. Consider grazing first-calf heifers with 3-year-olds or virgin replacement heifers.
2. During gestation, supplement first-calf heifers with grains (such as corn or DDG) to obtain 85% - 90% of mature body weight at calving. Research at the LSU AgCenter's Hill Farm Research Station has shown that energy supplementation during late gestation has a greater effect on subsequent BCS and body weight change compared with protein supplementation.— *Evaluating the effects of late gestation supplementation on timed –artificial insemination pregnancy rates and body composition in beef cattle; R. S. Walker ,D. LaMay , and B. Buttrey*
3. Keep a close eye on BCS. First-calf heifers should have a BCS of 6 at calving. If first-calf heifers begin to lose too much condition after calving, consider weaning calves early or offering creep feed/grazing.

— Jason E. Holmes, LSU AgCenter

"Never underestimate the power of Duck-Tape!!"

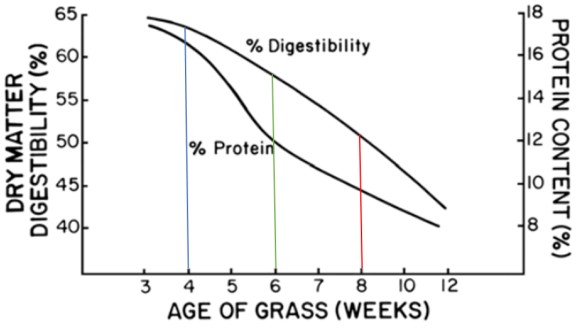
Quality Hay Production — Forage quality is a measure of the physical/chemical characteristics of the forage crop. Quality is related as the energy, crude protein and/or digestibility of the forage. Energy is typically reported as total digestible nutrients (TDN), which is an estimate of the nutrients digested from the forage. The term crude protein (CP) is used in reporting forage protein for ruminants since it is calculated from the measured nitrogen (N) content of the forage and not an actual measurement of protein. Although the actual protein is not determined, microorganisms in the rumen can utilize the N to synthesize amino acids and thus protein so the N measurement gives a good estimate of the potential protein for the ruminant. The fiber component is referred to as neutral detergent fiber (NDF) and acid detergent fiber (ADF). Neutral detergent fiber is a measure of the structural fiber of the plant. Percentage of highly digestible soluble compounds in the forage can be determined by subtracting the NDF from 100. Some components of NDF are digestible but ADF is a measure of mostly indigestible or very slowly digestible components.

Nutritional need of the livestock is another factor, along with the forage quality analysis, that should be considered when determining the quality of hay on hand. The forage quality needs of the hay can vary depending on stage of production of the animals. If feeding to maintain a dry mature cow, then adequate quality hay could contain about 8% CP and 50-55% TDN. If the livestock being fed are in lactation or are young, growing animals, then the previous hay would be considered low quality since it would not nearly meet the nutritional needs of the animal. Good quality hay for these animals would need to be about 12-14% CP and close to or greater than 60% TDN. So basically, the quality of hay should be determined by how it meets the nutritional needs of the animal and be considered high quality only if it requires minimum or no additional supplementation.

There are many factors that affect forage quality, and understanding these is an important part of producing quality hay. The single most important determinant of forage quality that a manager has control over is plant stage of growth. The more mature the plant the lower the forage quality. The highest quality component of the plant is the leaves and leaves are at their best quality soon after emergence and the quality of each leaf declines as it ages. This decline in quality is primarily a result of an increase in cell wall thickness which reduces the concentration of highly digestible soluble compounds. Another factor of maturity is the development of the stem which tends to be relatively more lignified than leaves, and as the stem grows, the ratio of leaves to stems declines, causing forage quality to decrease. Fertilization with N will not overcome the impact of plant maturity but does promote more rapid growth so will accumulate enough quantity to facilitate more frequent harvest which does enhance quality. Plant species can also have some influence on forage quality, and one of the more feasible options is to include legumes in the hay mix. Forage quality tends to decline as temperature rises, so focusing on producing higher quality hay early in the season may be an option to consider.

The goal of hay harvest should be to maintain the highest nutritive quality possible during harvest. Hay should be cut during a period when rapid dry down will occur to reduce respiration losses during curing. This can be aided by cutting when the ground is dry and leaving enough stubble to keep the hay off the ground for better air movement. If a tedder is needed, it should be used before the leaves are too dry to avoid leaf shatter and raking should be accomplished before complete dry down to again avoid leaf shatter as much as possible. Hay should be less than 20% moisture before baling to reduce the likelihood of excessive heat buildup and molding. Close attention to all aspects of hay production (growing and harvesting) are required to produce high quality and quantity of livestock feed. ***— M. W. Alison, LSU AgCenter***

Effect of Maturity on Coastal Bermudagrass Hay Quality

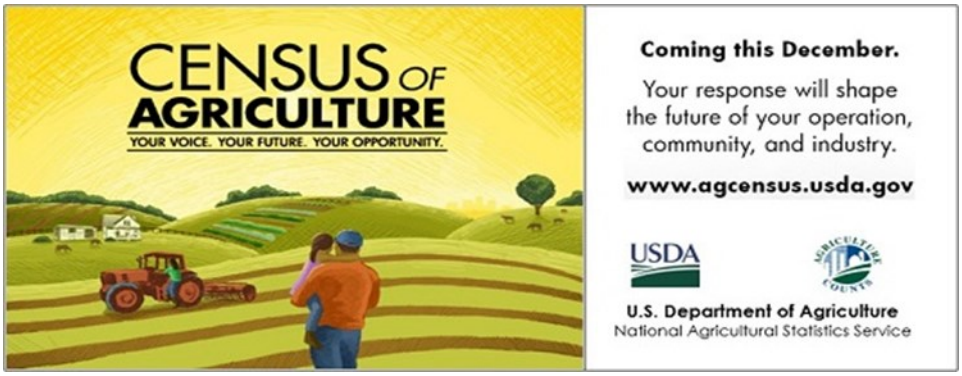


USDA Surveying Cattle Operations — Baton Rouge, LA – In July, the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) will survey about 9,300 cattle operations nationwide to provide an up-to-date measure of U.S. cattle inventories.

"This information helps producers make timely, informed business decisions and plan for herd expansion or reduction. It also helps packers and government leaders evaluate expected slaughter volume for future months and determine potential supplies for export," said Eugene Young, Director, Delta Regional Office. "Obtaining the current count of cattle will serve as an important decision-making tool for the entire agriculture industry."

During the first two weeks of July, Louisiana producers will have the opportunity to report their beef and dairy cattle inventories, calf crop, death loss and cattle on feed information. To make it as easy as possible for producers to participate in the survey, NASS offers the option of responding via the Internet, telephone, mail or a personal interview with a Louisiana NASDA representative.

The July Cattle report will be released on July 21, 2017 at 3:00 pm ET. This and all NASS reports are available online at www.nass.usda.gov/publications. For more information, call the Delta Regional Field Office at (800) 327 2970.



Louisiana Master Cattleman Program Opportunity — ALEXANDRIA, La. – Registration is open for a class of the Louisiana Master Cattleman program that will be held on the LSUA campus.

The 10, three-hour sessions will be held on Thursdays, starting July 20 and ending Sept. 21. The registration fee is $125 per person.

Experts from the LSU AgCenter will cover general management practices related to beef cattle production in Louisiana, which also includes Beef Quality Assurance Certification, pasture management, nutrition, breeding, reproduction, herd health, biosecurity, economics, carcass quality and cattle handling.

A meal will be served at each session.

For more information, contact AgCenter beef cattle program coordinator Vince Deshotel at 337-948-0561 or 337- 831-1635, or e-mail vdeshotel@agcenter.lsu.edu, or contact an LSU AgCenter Extension office.

Cattle markets slide into summer; more cattle on feed — With July 4 beef purchases complete, wholesale beef prices have dropped sharply the past ten days. Beef and cattle markets, have defied gravity by staying stronger, longer than most expected this spring. However, with seasonal pressure prevailing, beef and cattle markets have weakened and will likely struggle seasonally for the next six plus weeks. Beef markets often weaken during the summer doldrums, that period of summer heat between Independence Day and Labor Day. The summer slump may be mitigated somewhat if July 4 beef sales are strong prompting follow-up beef sales. Wholesale markets will likely struggle until August when Labor Day purchases will pick up to support beef features for Labor Day, the last big grilling holiday of the summer. Cash fed cattle prices have correspondingly dropped over $10/cwt. in the past ten days or so. Feeder cattle prices have dropped $10-$12/cwt. in the past week. Domestic and international beef demand will continue to be a key as beef supplies will undoubtedly continue to increase year over year in the second half of the year. Recently released retail meat prices show that Choice and All-Fresh retail beef prices increased from April to May. Choice retail beef prices in May were up 1.0 percent from last year while the All-Fresh retail beef price was down 3.9 percent year over year.

Beef production for the year to date in 2017 is up 3.8 percent, with cattle slaughter up 5.7 percent but being offset by sharply lower carcass weights so far this year. At the current time, steer and heifer carcass weights are down 17 pounds from the same time last year. Steer and heifer carcass weights bottomed seasonally in early May and are expected to increase seasonally into the fourth quarter. However, a normal seasonal increase from current levels would still have carcass weight down significantly year over year and will continue to moderate larger slaughter numbers.

The June USDA Cattle on Feed report showed another month of large year over year increases in May placements pushing June 1 on-feed inventories to 102.7 percent of one year ago. May placements were 112.2 percent of last year. May marketings were 108.8 percent of last year, a continuation of strong marketings that began in mid-2016. For the year to date, January-May, feedlot placements are up 9.2 percent while marketings have been up 7.0 percent year over year. Most of the increase in May placements were cattle under 700 pounds which means that those cattle will be marketed towards the end of 2017.

Strong beef demand has helped make the first half of 2017 a pleasant surprise to all cattle industry sectors. Strong demand in the third and fourth quarters may help significantly but supply pressures are likely to weigh a bit more heavily on cattle and beef markets in the second half of the year holding markets generally to a sideways pattern for the remainder of the year.
— COW/CALF CORNER The Newsletter From the Oklahoma Cooperative Extension Service; Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

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2017 Louisiana Cattle Marketing Strategies Program (Formerly known as the Louisiana Calf to Carcass Program) —

1) All calves must have a valid health certificate less than 30 days old upon delivery to the LSU AgCenter.
2) Producers can nominate steers and/or heifers.
3) Delivery date will be the last week in September. Right now those tentative dates for delivery are September 28-29, 2017. As soon as dates are confirmed, Dr. Tim Page will send out the confirmed dates and times for delivery. Calves will be shipped in November to Hitch 1 in Hooker, Oklahoma.
4) Producers do have the choice of retaining ownership through the feedyard or possibly marketing their calves through group video sale with Superior Livestock. We plan on marketing at least 1 group of LSU calves through Superior Livestock after preconditioning. If a producer wants to place all or just some of their calves into the Superior video sale with LSU calves, we will try our best to do that. We will first have to weigh calves and determine type (breed, color, etc.) before we can decide whether they will fit into the group.
5) **All producers must go to the LSU website listed in the packet and submit the Supplier Registration Form. This is the only way that LSU will issue checks to producers in this program.*
6) The nomination fee is $85/head. This covers the trucking and the preconditioning expenses. All checks must be made out to the LSU School of Animal Sciences.
7) The nomination form also asks for sire breed of each calf. This is important information to the overall program.
8) Each producer must fill out the nomination form and sign the form. Nomination forms may be mailed to: Dr. Tim Page, 102 Francioni Hall, Baton Rouge, LA 70803 or scanned and then emailed to tpage@agcenter.lsu.edu.
9) Questions should be directed to Dr. Tim Page at tpage@agcenter.lsu.edu or (225)405-4225 or Mr. Adam Barrilleaux at abarr22@lsu.edu or (225)337-1536. Nomination forms can be obtained from your local County Agent.

July - August Beef Cattle Management Tips:

Below are some all-purpose management tips in an abbreviated format that cattle producers should consider for the months indicated. "General" management tips are intended to fit all situations while the "spring calving - January, February, March" and "fall calving - October, November, December" tips are for those specific calving programs. Some producers are likely aware of each tip and have incorporated many into their management programs. Other producers may find these tips to be suggestions to consider in their future management. Regardless, every producer will have to consider how a specific tip might be adapted to fit their individual situation, and some modification of the times provided will be expected. Severe environmental conditions will also dictate some modification of the tips depending on the severity in each location. A more detailed description of management opportunities can be found in numerous AgCenter publications available in the local parish extension office or on the web. Additional scheduling and management details in a worksheet format are available on-line from the LSU AgCenter in the Monthly Beef Cattle Management Calendar & Workbook at:

http://text.lsuagcenter.com/en/crops_livestock/livestock/beef_cattle/production_management/Workbook.

Month	Management	Tip
July	general	1. Continue fly control. Watch fly numbers; as fly tags get old, you may need to begin spraying or using back rubs.
		2. Clip overgrown pastures.
		3. Check for pinkeye, cancer eye and foot rot.
		4. Send in forage samples on hay now so you will have results to use in planning winter feeding.
		5. Check water and minerals often. Plenty of clean, clear water is critical in summer. At 90 degrees F, a mature cow nursing a calf drinks about 17 gallons of water a day.
	spring calving	1. Consider creep feeding, depending on pasture conditions and marketing plans.
		2. Pregnancy check cows 45-60 days after the end of the breeding season.
		3. Pregnancy check heifers 45-60 days after the end of the breeding season.
		4. Sell open heifers now.
		5. Brand or otherwise establish permanent IDs for bred heifers.
	fall calving	1. Wean calves depending on pasture conditions and marketing plans.
		2. Wean replacement heifers and seperate from the rest of the herd. Weigh heifers to project needed gain between now and breeding (in December).
		3. Deworm calves at weaning.
		4. Deworm cows if needed.
		5. Cull open and poor producing cows after weaning.
August	general	1. Continue fly control. As fly tags get old, you may need to begin spraying or using back rubs.
		2. Evaluate winter grazing needs. Check on supply and prices for winter annual seed.
		3. Check water and minerals often.
		4. Stockpile bermudagrass for late fall grazing.
		5. Get round bales into the barn or move to dry, well-drained areas.

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Month	Management	Tip
August	spring calving	1. Pregnancy check cows. It's a good time to deworm while cows are up.
		2. Check cows for bad eyes, udders, feet and legs, and production records to determine cows that need to be added to the cull list.
		3. Replacement heifers should be calf-hood vaccinated for brucellosis at 4-8 months of age.
		4. To precondition calves, vaccinate for respiratory diseases (IBR, Pi^3, BVD) 45 days prior to shipment.
	fall calving	1. Replacement heifers should be 8-10 months old now. Forage quality declines rapidly from now to frost. Keep an eye on heifer gains and supply supplemental feed as needed.
		2. Check cow condition. Cows should be in moderately good condition prior to calving.

Data Source: USDA-AMS Market News		Week of 6/30/2017	Week of 6/23/2017	Week of 7/1/2016
5-Area Fed Steer	all grades, live weight, $/cwt	$ 121.50	$ 130.12	$ 122.50
	all grades, dressed weight, $/cwt	$ 193.80	$ 205.94	$ 195.53
Boxed Beef	Choice Price, 600-900 lb., $/cwt	$ 230.64	$ 244.90	$ 208.88
	Choice-Select Spread, $/cwt	$ 17.80	$ 26.14	$ 13.19
500-600 lb. Feeder Steer Price	Mississippi statewide market average, M&L #1-2, $/cwt	$ 145.00	$ 146.50	$ 127.50
	Missouri statewide market average, M&L #1, $/cwt	$ 166.71	$ 167.74	$ 156.30
	Oklahoma City market average, M&L #1, $/cwt	$ 171.53	$ 172.68	$ 158.06
Feed Grains	Corn, Kansas City, $/bu	$ 3.43	$ 3.45	$ 3.48
	Corn, Pine Bluff, AR, $/bu	$ 3.45	$ 3.53	---
	DDGS, Eastern Corn Belt, $/ton	$ 106.00	$ 105.00	$ 169.50
	Soybean Meal, Rail, Central IL, $/ton	$ 296.40	$ 295.80	$ 413.30
	Cottonseed Meal, Memphis, $/ton	$ 180.00	$ 177.50	$ 283.50
	Whole Cottonseed, Memphis, $/ton	$ 198.00	$ 198.00	$ 275.00

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July—August 2017

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