Southeast Cattle Advisor

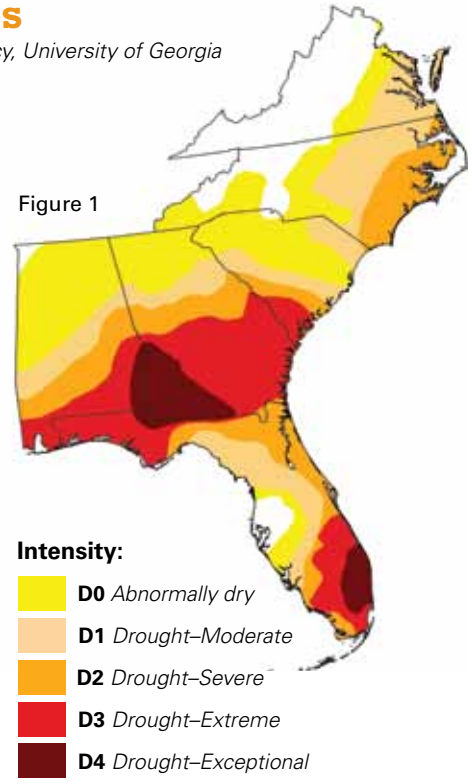
Management and marketing summertime challenges

Dr. Walt Prevatt, Auburn University and Dr. Curt Lacy, University of Georgia

Summer weather impacts summer management and marketing considerations. Currently, many pastures in the Southeast are extremely dry (Figure 1). There is not much hope for any near-term relief. As of early June, almost 25 percent of the Southeast is rated as being in extreme drought. At the same time, feeder-cattle futures prices have continued their retreat from highs of $143 per hundredweight in Georgia in April to $138 per hundredweight as of this writing. Feed and hay prices are expected to increase throughout the summer (with the exception of some by-products). So, with all of these challenges what should cattlemen do?

The good news for cow-calf producers is that prices for calves and feeders should increase soon and improve throughout the fall 2011. Tight supplies continue to factor into the market, and this fact serves cattlemen well. While feeding calves is the last thing that anyone wants to think about today, it is probably something that should be considered.

Figure 1



Drought Conditions (percent area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	14.22	85.78	60.44	41.28	24.54	5.90
Last week (06/07/2011 map)	19.53	80.47	56.67	37.28	21.58	2.72
3 months ago (03/15/2011 map)	14.36	85.64	57.95	22.18	4.64	0.00
Start of calendar year (12/28/2010)	23.01	76.99	51.84	23.55	5.63	0.00
Start of water year (09/28/2010 map)	18.18	81.82	38.04	10.32	0.90	0.00
One year ago (06/08/2010 map)	94.62	5.38	0.00	0.00	0.00	0.00

U.S. Drought Monitor Southeast

Here are some management and marketing tips for drought-stricken cattle producers:

1. Consider weaning calves early, especially those from first-calf heifers. This will reduce the feed needs of lactating cows and improve

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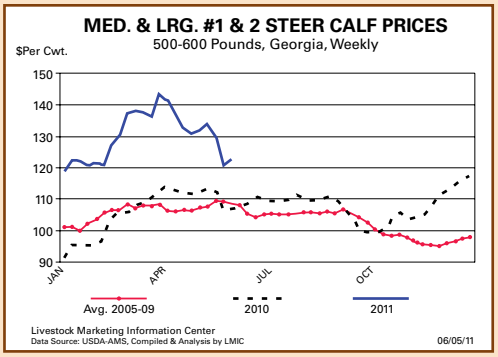

Item	Price
SALES PRICES	
Cattle and Beef Prices as reported by USDA-Agricultural Marketing Service and Georgia Department of Agriculture	
GA 500-600 lbs. steer ($/Cwt.)	$122.66
GA 700-800 lbs. steer ($/Cwt.)	$108.60
GA 80-85% lean slaughter cow ($/Cwt.)	$73.76
GA Bred cow, Med.-Lrg, 1-2, 4-6 mos. bred ($/head)	$962
GA Cow-calf pairs, Med.-Lrg, 1-2, ($/pair)	$1,039
5-area Live Cattle Price ($/Cwt.)	$109.44
Choice Boxed Beef Cutout ($/Cwt.)	$172.57
Choice-Select Spread ($/Cwt.)	$5.81
INPUTS	
Farm Diesel ($/gallon), less than 1,000 gallons	$3.30-$3.59
*Feed Stuffs as reported by USDA-Alabama Department of Agriculture Market News, FOB Central AL unless otherwise denoted.**	
Hay for cows, Good quality (9-13% CP), ($/ton)	$67
#2 Yellow corn ($/bushel)	$7.40-$8.40
Soybean hull pellets, bulk ($/ton)	$185-$220
Corn Gluten pellets, 21% protein, bulk ($/ton)	$195-$200
Whole Cottonseed, FOB Gin ($/ton) $165	$330-$385
Distillers' Dry Grain, FOB Central GA ($/ton) *	$270
Cottonseed Meal FOB Central GA ($/ton) *	$340
Fertilizer prices as reported by USDA-Alabama Department of Agriculture Market News. All prices $/ton unless otherwise noted.	
Ammonium nitrate (34-0-0)	$455-$480
DAP (18-46-0)	$660-$740
Muriate of Potash (0-0-60)	$560-$630
Lime (spread)	$30-$45

For week ended: June 21, 2011

the conception rate for second-calf females.

2. Identify cows to cull now. Cull-cow prices remain high. Moreover, most cows will only lose weight during the summer, especially during a drought. Too add insult to injury, thin cows will bring a lower price than higher-dressing cows. So, sell cull cows now while they are heavier. This will increase revenue and reduce feed bills.

3. Begin identifying and utilizing sacrifice areas to feed hay and supplement.

4. Evaluate the economics of backgrounding calves. Seasonally, some by-product prices are lower in the summer. Also, calf prices usually tend to increase through the summer. Facilities, feed and capital must all figure into this decision.

5. Procure low-cost feedstuffs to maintain the cowherd for at least 90 days. Any feedstuffs not used can be used during the winter feeding period.

6. Minimize feed and hay waste.

7. Market feeder calves before quality and/or weight is adversely impacted.

There are several drought management and marketing publications available at the Southeast Cattle Advisor website under the "Presentations, Pubs and Podcasts" section. ●

How does feeding corn by-products affect beef quality?

Dr. Alex Stelzleni, Dr. Lawton Stewart, Jr. and Jacob Segers, University of Georgia

In the Southeast there is a growing trend among cattle producers to manage their calves locally all the way through the finishing phase. Increases in cost of traditional feedstuffs have beef producers examining more cost-effective production methods and sources of protein and energy. The inclusion of corn-gluten feed and dried distillers grains plus solubles has been used in beef-finishing operations for several years. However, recently corn processing and ethanol plants have expanded to the Southeast, making these by-products readily available at a more affordable price.

Beef producers finishing their own cattle may also choose to stocker the cattle to achieve cheaper gains during the growth phase, leading to less time and inputs during the finishing phase. Due to space or resource limitations it is common to supplement stockering beef cattle with a concentrate source that has acceptable protein availability to support growth and development. However, many producers lack the space to store numerous feedstuffs to fill the nutritional requirements of their cattle at different stages of growth, making it essential to find feed products that can be used in multiple scenarios when purchased in bulk.

In order to address these concerns, researchers at the University of Georgia studied the effects of using corn-gluten feed or dried distillers grains plus solubles compared to soybean meal and hammered-ear corn from weaning through finishing on carcass and meat quality attributes. Eighty-one Angus crossbred steers were randomly assigned to one of nine pens and stockered for 84 days on one of three diets consisting of (on a dry matter basis) (75% corn-silage and 25% of one of three concentrate rations) 1) dried corn-gluten feed (CGF), 2) dried distillers grains plus solubles (DDGS), or 3) soybean meal with hammered-ear corn (60:40; SBM). This project was conducted at the Georgia Mountain Research & Education Center, Blairsville, Ga. After stockering, four steers were randomly selected from each pen for finishing (36 steers total) at the Wilkins Beef Research Unit in Rayle, Ga. Steers were acclimated to their respective finishing diets that included the same supplement from the stocker phase (25%) and 50% corn, 10% cottonseed hulls, 14% soy hulls and 1% mineral/additive mix. After 100 days on feed, the steers were transported to the UGA Meat Science Technology Center and harvested under federal inspection. Carcass data were collected 24 hour postmortem and strip loins were removed for shelf life and tenderness evaluation.

Long-term supplementation with CGF or DDGS at 25% of diet did not influence carcass characteristics compared to SBM. Hot carcass weight, dressing percent, calculated

Table 1. Carcass characteristics and strip loin Warner-Bratzler shear force (WBS) for steers fed corn-gluten feed (CGF), dried distiller grains plus solubles (DDGS) or soybean meal with corn (SBM) as the main protein source.

	Protein Source			
	CGF	DDGS	SBM	SEM
Hot carcass wt, lb	780.60	771.70	751.90	16.16
Dressing percent	63.80	62.90	63.50	0.59
Ribeye area, in^2	12.00	12.00	12.30	0.50
Fat thickness, in	0.47	0.44	0.47	0.03
USDA yield grade	3.10	3.11	3.05	0.18
Marbling	small^{94}	small^{33}	small^{58}	23.44
Maturity	A^{36}	A^{31}	A45	6.57
Lean color[1]	6.42	6.25	6.17	0.25
Strip loin WBS, lb	6.85	6.85	7.71	0.66

1= Extremely dark red, 2= Very dark red, 3= Dark red, 4= Moderately dark red, 5= Slightly dark red, 6= Cherry red, 7= Moderately bright cherry red, 8= Light cherry red

USDA yield grade, marbling, maturity and lean color were similar for all diets. Furthermore, strip loin tenderness was not influenced by the by-product supplements (Table 1). Steak color is one of the primary attributes determining if a consumer

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will purchase a product. Consumers tend to pay particular attention to the redness and any discoloration that may be on the surface of a steak and oxidation of the lipid fraction hastens the loss of color and increases discoloration. Feeding corn by-products at 25% of the diet did not affect strip loin redness, acceptance, percent discoloration, or lipid oxidation over 9 days of retail display. However, all color parameters declined and lipid oxidation increased as days of retail display increased, as expected (Figures 1-4). These data indicate that corn-gluten feed or dried distillers grain plus solubles can replace soybean meal with hammered-ear corn at 25% of the diet from weaning to harvest without altering carcass characteristics or beef quality.

More information about this study can be found at the website **http://purl.galileo.usg.edu/uga%5Fetd/segers%5Fjacob%5Fr%5F201008%5Fms**. Or, visit **www.ads.uga.edu** for the stocker and meat quality studies.

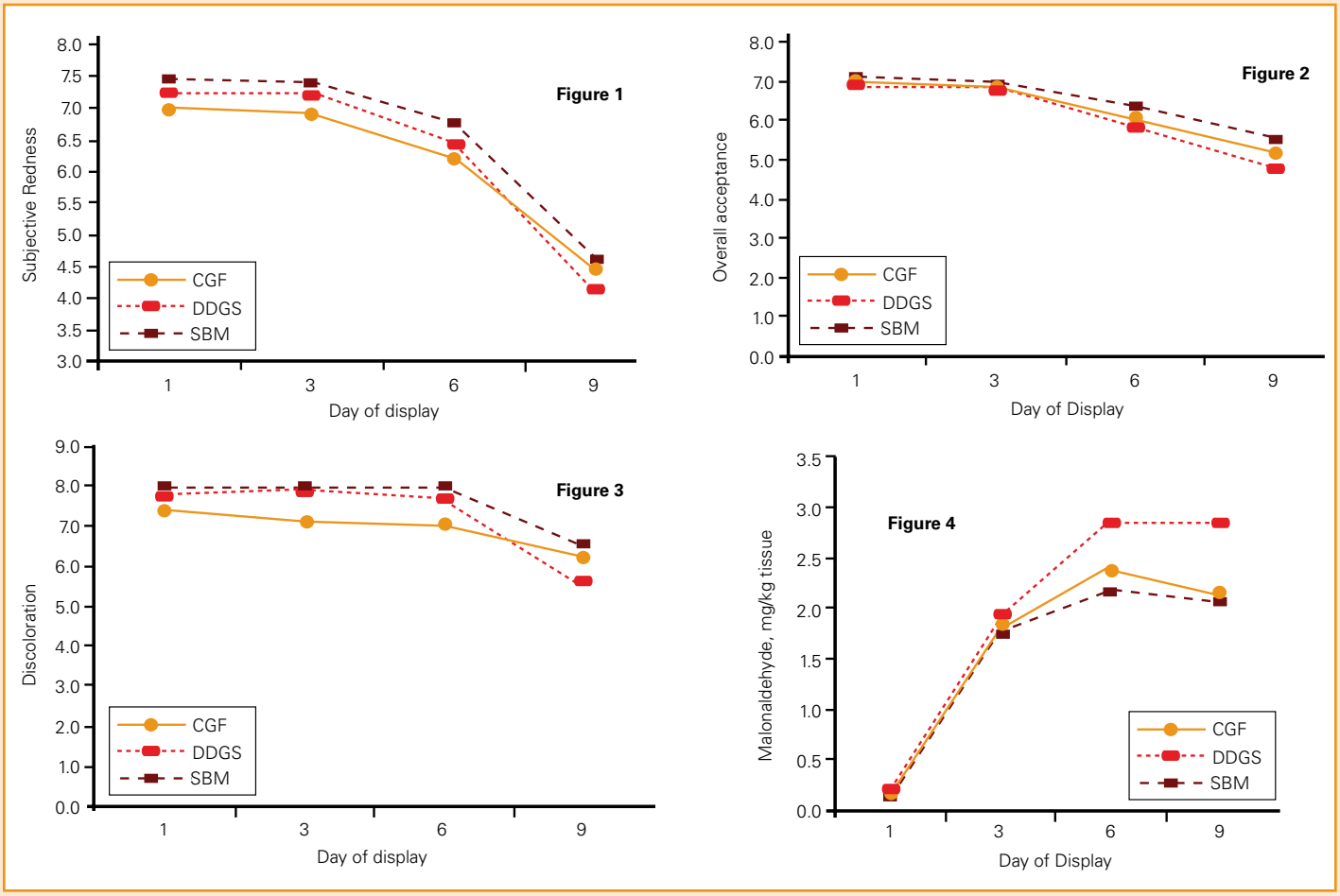


Figure 1-3. *Subjective evaluation over 9 days shelf-life for beef strip steaks from steers fed corn-gluten feed (CGF), dried distillers grains plus solubles (DDGS), or soybean meal with corn (SBM) as a protein source from weaning to slaughter.* **1**.*) Subjective redness (1= extremely dark red, 8= extremely bright cherry red) showed a treatment by day interaction (P= 0.04) at day 9 steaks from steers fed DDGS became less red (P< 0.01) than SBM steaks.* **2.)** *Overall acceptance (1= extremely unacceptable, 8= extremely acceptable) had no treatment effect (P= 0.17) but decreased (P< 0.05) over time.* **3.)** *Discoloration (1= 95-100% discolored, 8= 0-5% discolored) showed a treatment by day interaction (P< 0.01) where CGF steaks were more (P< 0.04) discolored at day 3 and day 6, but by day 9 DDGS steaks were more (P< 0.01) discolored than SBM steaks.* **Figure 4**. *Lipid oxidation over 9 day shelf-life. Lipid oxidation was not different (P= 0.74) among protein supplements, but did increase over time (P< 0.01).*

Commodity shed: a wise investment?

Dr. Darrell L. Rankins, Jr., Extension Animal Scientist, Auburn University

We don't usually think of buying feed at this time for cattle during a typical year, but we are not facing a typical year. Dry conditions grip many parts of the Southeast right now. Fortunately, this is probably one of the best times to purchase some of your feed. In order to purchase feed now for use later in the year, it is necessary to have some sort of a storage system, most likely a commodity shed. As one begins to plan a commodity shed it is important to consider a few factors.

1) Delivery vehicle. The typical commodity feed delivered in Alabama is transported by tractor-trailers that use 53-foot trailers and need about 14 feet of vertical clearance. It is also important to note that the trailer may be a dump trailer or a walking floor-type. Those with walking floors are most often used to eliminate the need of excessively high roof clearance or having to dump the feed outside and then move inside with a front-end loader. Ample space for turnaround and maneuvering is a must. Drivers spend most of their time driving forward on pavement not backward in a farm lot.

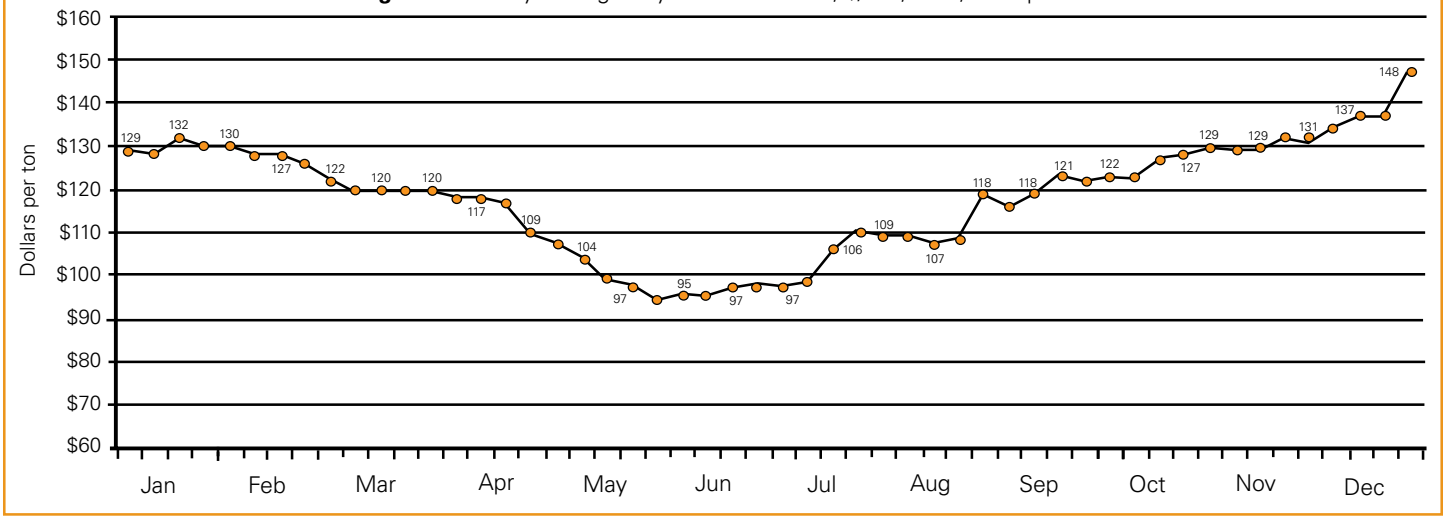
2) Size of commodity shed. Size must first start with the fact that most feeds are going to come in increments of 24 tons. These tractor-trailers need an eave height of at least 14 feet, and each bay should also be at least 14 feet wide. Clearance is needed along each side of the truck in order to open end doors. Most feeds that are unloaded off of a live-bottom truck will be piled to a height of 6 to 8 feet. For most of the by-products used in this region, a feed bay that is 40 to 45 feet in length will hold one load or more.

3) Nutritional value. The nutritional value of by-product feeds can be quite variable. For an in-depth discussion of additional by-products please refer to Alabama Cooperative Extension System Publication ANR-1237. This publication can be requested at your local county extension office or go to the website **www.aces.edu/pubs/docs/A/ANR-1237/**.

4) Pricing. As I indicated earlier, we are currently in the average low-price period for purchasing soybean hulls. The accompanying graph shows yearly price trends for soybean hulls. They are depicted as dollars per ton, FOB in Memphis, TN. In addition, other commodity feeds also follow this general price trend in the Southeast. It is wise to become familiar with these price trends and then take advantage of these "windows of opportunity."

5) Bottom line. The ability to purchase feeds at times of low demand and then the ability to store those feeds until needed can result in substantial savings to any beef cattle operation. A commodity shed is quite useful for storing a variety of these feeds. But remember, when trying to manage tractor-trailer loads of commodity feeds, expect the unexpected!

Figure 2. Weekly Average Soybean Hull Prices, $/Ton, FOB, Memphis 2006-2010



Where are we with feed efficiency?

Dr. G. Cliff Lamb and Nicolas DiLorenzo, University of Florida – North Florida Research and Education Center, Marianna, FL

Feed efficiency is receiving significant attention because it can have a big impact on beef cattle production systems. Feed efficiency warrants consideration in the beef industry because 55% to 75% of the total costs associated with beef cattle production are feed costs and a 5% improvement in feed efficiency can have an economic impact four times greater than a 5% increase in average daily weight gain.

Feedlot studies have demonstrated that a 10% improvement in average daily gain (ADG) improved profitability 18%. Whereas, a 10% improvement in feed efficiency returned a 43% increase in profits. Thus, efforts aimed at improving the efficiency of feed/forage use will have a large impact on reducing input costs associated with beef production.

Although the depths of feed efficiency research have vastly expanded in the past decade, most research efforts have focused on growing/fed cattle. Until recently, little data has been collected on the breeding herd, which consumes about 70% of the feed utilized throughout all beef production systems. In the Southeast, forage-grazing females such as replacement heifers, young cows and mature cows compose the predominant classes of cattle. Therefore, it is important for producers to better understand the implications feed efficiency has on the breeding herd.

Traditionally, the most common measure of feed efficiency in beef enterprises has been feed conversion ratio (FCR), also referred to as feed:gain (F:G). However, when applying this feed efficiency trait to their cow herd, beef producers should consider the relationship of FCR with mature body size. The highly negative correlation between FCR and growth rate as well as the observed increase in mature cow size resulting from FCR selection indicates that selection for improved FCR may result in amplified cow maintenance requirements and higher feed costs.

More recent data indicates that residual feed intake (RFI) is a more desirable alternative measure of feed efficiency that has not been shown to increase mature weights or greatly affect other phenotypic traits in cattle. It measures the variation in feed intake beyond that needed to support maintenance and growth requirements. It is calculated as the difference between actual feed intake and the feed an animal is expected to consume based on its body weight and average daily gain. Therefore, when cattle consume less feed than expected for their size and rate of gain, they have a negative RFI, which equates to a more desirable feed efficiency status as compared to cattle with more positive RFI values. One of the important findings in almost all of the studies to date show little or no correlated response in other important traits such as growth rate when selecting for RFI, so calves with lower RFI values consume less feed for similar performance.

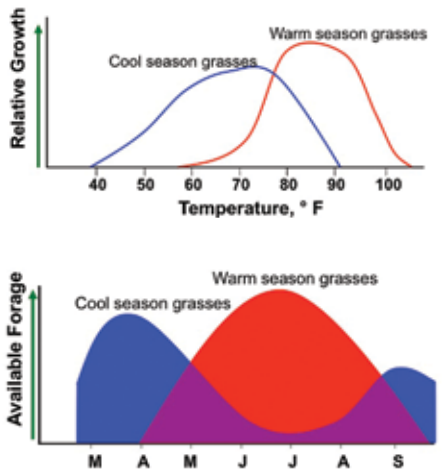
Current research on the impacts of selection for feed efficiency can be accessed at the following websites (**http://nfrec.ifas.ufl.edu/programs/feed_efficiency.shtml**; **http://edis.ifas.ufl.edu/topic_beef_cattle_management**; **http://www.animal.ifas.ufl.edu/extension/beef/beef_cattle_report/2011/index.shtml**.

What are some warm-season annual forage options?

Dr. Dennis Hancock, Forage Extension Specialist, The University of Georgia

Warm-season forage grasses can be used to fill the void left by cool-season grasses as the heat increases (Figure 1). Commonly, we use bermudagrass or bahiagrass as perennial warm-season

Figure 1.



grasses. However, there are many occasions where having a warm-season annual forage is helpful. Table 1 lists the major warm-season grasses that are commonly used to fill the summer gap and make a well-rounded forage system. As with most issues, each of these species has positive and negative attributes. Many of these attributes are summarized in Table 1.

For filling short-term gaps in forage production, annual forage species are more productive and cost effective. For example, some annuals (pearl millet and sorghum x sudangrass hybrids) are quick to establish and quite productive under mild to moderate drought conditions. Warm-season annuals are also helpful as a smother crop in renovating pastures or hayfields, and some make excellent summer cover crops when temporary erosion control measures are needed.

Unfortunately, warm-season annuals are also more prone to accumulating toxic levels of nitrates in the forage during drought conditions. Members of the sorghum family (Johnsongrass, sorghum, sudangrass, and sorghum x sudangrass hybrids) can also produce toxic levels of prussic acid in severe droughts or following frost damage.

What Will it Be Used For?

Not all of these warm-season annuals are easy to work with in a typical forage production system. Some of these species often grow erratically, mature too quickly or are extremely sensitive to overgrazing. This can make some of these species very difficult to manage as a grazing crop and result in unacceptable levels of waste or stand failures. Hay production may also be impractical. Some of these warm-season forages produce coarse leaves and stems that are near impossible to get dried down for haying. In such cases, baleage or some other haylage technique may be the only feasible harvest option. Regardless, it is critically important to understand how the forage is best used before settling on a particular forage option.

Attention should be paid to planting date guidelines. Though there is some variation in the sensitivity of these species to planting date, it is important to establish warm-season forages within the recommended range of planting dates for the given region. Late planting dates often result in low yields and plants that mature too quickly.

When is it Needed?

The fact that planting date affects total yield and forage distribution brings up a final point, which is that it is important to understand when and how much forage is needed. For example, pearl millet and members of the sorghum family (with some exceptions) produce most of their forage within the first 45-60 days of planting and are less productive for the remainder of their 120-150 day growing season. As a result, staggered planting dates may help to smooth the distribution of these forages, particularly when grazed.

In summary, warm-season forages can provide high yields of high-quality forage during the hottest months of the year, when the cool season grasses are providing little (if any) forage. However, care should be taken to fully understand the positive and negative attributes of the warm-season annual forage options. Understanding the role that these warm-season forages can play in creating a well-rounded forage program can help even out forage availability without breaking the bank.

Table 1. Key characteristics of common warm-season forage grasses

		Quality‡		Cost of§		Ease of Use for¶	
Forage	**Yield†**	**CP**	**TDN**	**Establishment**	**Production**	**Grazing**	**Hay**
Annuals	(tons/s)	(%)	(%)				
Browntop Millet*	1-3	9-12	50-56	V. Low	Low	3	2
Crabgrass	2-5	9-12	58-65	Low	Medium	1	3
Forage Sorghum	4-8	9-12	52-60	Medium	V. High	4	4
Pearl Millet	4-6	8-12	52-58	Medium	High	2	4
Sorghum x Sudan	4-10	9-12	53-60	Medium	V. High	3	4
Sudangrass	3-5	9-12	52-58	Medium	V. High	3	2
Teff*	1-1.5	12-16	57-63	Medium	Low	3	1

† Typical range in yields of recommended varieties, but highly dependent on growing season and conditions.
‡ Assumes harvest or grazing occurs at late vegetative- early reproductive stages of growth.
§ Based on 2011 seed, fertilizer and fuel costs and assuming moderate soil fertility.
¶ Ratings are 1-4:1 relatively easy and 4= quite difficult or requires high level of management.
**Species that are not recommended for the Southeast because of relatively poor production.*

Are there financial incentives for weaning calves on the ranch prior to shipping?

Dr. John Arthington, University of Florida - IFAS

A publication from Colorado State University (JAVMA, Vol. 229, No. 9, November 1, 2006) reviewed the impact of defined health programs on the sale price of beef calves marketed through a livestock video auction service. Their data includes 11 years of sales (1995 through 2005) and incorporates over 3 million feeder calves. To my knowledge this is the largest data set ever analyzed to evaluate the financial merits of calf preconditioning. Among others, the study included the V34 program, involving a pre-weaning vaccine against 7 types of clostridia and at 2 to 4 weeks prior to shipping vaccines against IBR, PI3, BVDV, BRSV, and M haemolytica or P multocida (or both). The second program, V45, involves a very similar vaccination schedule (see report for specifics), but also involves booster vaccinations and the weaning of calves at the ranch for a minimum of 45 days before shipping. The results of this study are revealing. Calves enrolled in these preconditioning programs were valued at approximately $14 and $38 more per head than calves with no certified preconditioning program. Estimated vaccine costs were $3.25 and $4.75 per calf for V34 and V45 programs, respectively. Thus, it is likely that the V34 program (or other similar preconditioning programs) provides a positive financial return to the cow/calf producer.

On average, the sale price of the V45 calves was about $24 more than the V34 calves. Less the estimated costs of additional vaccine products needed to qualify for the V45 program, the average premium was about $19.25 over the V34 calves. In our experiences, the V45 calves consume an average of 10 pounds of feed daily when managed on good pastures for 45 days prior to shipping, resulting in approximately $50/calf for feed costs. A load of calves ready to be shipped on the V34 program, but kept on the ranch for 45 days may experience some morbidity or mortality loss. We estimate 1 to 2 V34 calves will not ship in the V45 program each year. Compared to the V34 program, V45 calves are realistically costing the producer an additional $60 for feed, death loss and additional vaccine. Averaged over 11 years on the sale of 3 million calves, this $60 investment has returned about $24. Even if a producer's feed and labor options and the V45 calves actually gain weight during the 45 days prior to shipping, the margin of loss represented here may be difficult to overcome.

The V34 / V45 comparison above is unique to cow/calf producers marketing truckload lots of calves. For producers unable to market truckload quantities, the V45 program offers opportunities for producers to commingle groups of calves to achieve truckload lots. In these situations, the

added value of weaning the calf on the ranch prior to marketing may be greater than the examples described above. Further, as the value of V34 calves has remained fairly steady, the value of V45 calves in this study increased in the later years of data collection, thus buyers are recognizing greater value in the V45 program. (This article was adapted from a previous publication by the author in the The Florida Cattlemen and Livestock Journal. 71(8):8-12.). ●

This newsletter is a collaborative effort between cooperating universities, USDA-CSREES and the Southern Region Risk Management Education Center.