

Wean or sell calves: Options for producers

BY PHIL OSBORNE
Animal Husbandry Specialist
WVU Extension Service

The prolonged drought has many West Virginia beef producers wrestling with management and marketing options for feeder cattle. Specifically, what is the economic feasibility of selling calves now versus weaning and feeding them for 60 days until the Quality Assurance Feeder Calf sales?

The drought has played havoc with well-designed plans for marketing feeder cattle. However, having a sound plan that is easy to adjust is better than having to react hastily, as those without a plan so often do. The challenge is to keep cows in a body condition score (BCS) of 4 to 6 and still sell calves this fall that will cover annual production costs.

Following are some options for various situations:

- **Gather and sell the calves at the auction market and feed the dry cows.** The weakness of this option is that you have fewer pounds to sell and therefore

reduced income. You hope that a number of buyers appear on sale day needing the weight and kind of cattle you have. This option will at least allow the cow herd to recover before winter and hold out-of-pocket expenses to a minimum. This may well be the best option for producers who have a handful of cows and no facilities or who have not been part of a calf marketing pool. Marketing calves in a calf pool or in partnership with other producers allows for some substantial savings. A dozen or so weaned calves generally will not realize a market advantage unless assembled in a larger, uniform lot or trailer load.

- **If you were fortunate enough to have made hay for the winter and still have pastures or hay meadows to graze until sale day, you may creep feed the calves to improve market weights.** Grain is relatively inexpensive this year. Creep grazing meadows is an effective, low-cost management option that increases returns. If pastures are in short supply, the cows must be in good

body condition because as the calves increase in weight, the condition of the cows is pulled down. Once calves are worked on to creep, if pastures are short, you can begin to feed the cows as though they were in late gestation. The BCS of the cow should not get too much below 4 while she is nursing for her to avoid going into winter in the same condition.

- **Weaning the calves and feeding the dry cows may be the option for making the best of a bad situation and adding value to your calf crop.** Early weaning allows cows to maintain or improve body condition before going into winter. This is extremely important since available winter feed supplies are short. It is much cheaper to feed dry cows than lactating cows. Removing the calf reduces the cow's nutrient needs by nearly 45%. If calves are weaned early enough, most cows can recover at least one condition score before winter on available forage with little or no supplementation.

Most cows not already bred probably should be sold.

Early weaning allows cows already marked for sale to be removed from the herd at a time when the price of cull cows is seasonably more favorable than later in the fall. The

early weaning of calves may be the only option for many producers who have run out of grass or whose grass has been forced into dormancy.

Many producers are reluctant to wean calves because they lack facilities or fear the calves will get sick. Weaning home-raised calves is far simpler than weaning calves that have been assembled and transported from several sale barns. Sale barn calves are exposed to a greater number of stresses and often lack the prevaccinated immunity that helps diminish health-related problems.

Weaned calves are better prepared to handle stress, and the risk of losses due to sickness are reduced. Weaned calves allow the producer more flexibility when marketing. Weaning will keep you from having to sell calves when other producers are selling them because of the drought. The drought is more or less restricted to the Virginias, southwestern Pennsylvania, and eastern Ohio. Most of the feedlot areas in the country are expecting a good crop year and are likely to buy cattle after the harvest.

Weaning your calves provides you with more market flexibility, allows the cows to recover before winter, and helps ensure that cows will breed back faster next year. Contact WVU county Extension agents or specialists for assistance. ●

Alternative feeds extend limited supplies

BY ED RAYBURN
Forage Agronomy Specialist
WVU Extension Service

With the dry weather, many pastures are already grazed off and the hay crop is short. If rainfall returns in August and September, there is a chance of getting some fall grazing from pastures and hay meadows that are properly fertilized. However, the amount of feed still will be less. Managers need to evaluate optional purchased feeds and decide whether it is more economical to buy feed or to sell livestock.

The economics of purchased feed is based on the cost of the feed (including trucking), the animal response to the feed, the value of the animal gain, and the substitution value of the feed compared to

alternative feeds. Commodity feeds and by-product feeds are relatively inexpensive this year. Soybean hulls and shell corn can be purchased in tractor trailer load lots for as little as \$80-\$110 per ton. But who needs

that much feed? This amount of soy hulls fed at 5 pounds/head/day will feed 50 cows for 200 days.

If there are no fall rain and no fall pasture, there will be a 200-day wintering period before spring grazing. If two livestock producers, having 25 cows each, partner on a tractor trailer load of such feed, they could extend their feed supply at a relatively low cost. Purchasing large lots of commodity feeds delivered directly to the farm can save the producer up to half the cost of buying the same feed by the bag at the feed store.

When considering what supplemental feed to buy, compare feeds based on price and nutritive value, the availability of homegrown forages and their nutritive value, and the nutritional requirements of the livestock being fed. The nutritive value of several supplemental feeds available in West Virginia is presented in the table.

Corn gluten is a high-protein, high-energy feed. It is not as palatable as some

Nutritive Value of Commonly Available By-Product Feeds

Feed	DM	CP	TDN	ADF	NDF
corn gluten feed	90	25	83	12	45
corn, ground-shell	88	10	85	3	9
cotton seed	92	24	96	29	39
poultry litter	75	20-30	55-60		
soybean hulls	91	12	77	50	67
soybean meal	89	50	84	10	13
wet brewers grain	21	23	66	23	42
wheat bran	89	17	70	15	51

DM—dry matter CP—crude protein (DM basis) TDN—total digestible nutrients
ADF—acid detergent fiber NDF—neutral detergent fiber

Alternative feeds

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other by-product feeds, but animals perform well on it. Corn gluten feed can be fed at up to 15 pounds/head/day.

Corn is the staple livestock feed commodity in the United States. It is readily available and relatively inexpensive. It is a good source of energy, but low in protein. It is used regularly to feed growing and finishing cattle, dairy cattle, and sheep. It can be used as a feed for dry beef cows, but caution needs to be exercised that it is used as a cost-effective supplement. If ground-shell corn is fed at more than 2 pounds/head/day with poor quality hay, hay intake and digestibility will be decreased. For growing cattle more than 500 pounds, ground-shell corn will provide higher gains than whole-shell corn. For young calves that chew better, whole-shell corn may be a practical alternative when corn is inexpensive or is a major part of the diet.

Cottonseed is a high-energy, high-protein supplement. It is high in energy because it has a high fat content. If fed in too great an amount, the fat in the seed can adversely affect the rumen bacteria and the digestibility of hay in the ration. A mature cow can safely eat up to 7 pounds/day.

Soybean hulls are the skins taken off soybean seeds before they are processed for oil and meal. They are a relatively high-energy, medium-protein feed. When fed to dry beef cows, they do not suppress the digestibility of low-quality hay. Soy hulls can be fed at up to 10 pounds/day to a mature cow with no adverse effects. Pelleted soy hulls will transport and feed better than soy hull flakes. The cost of pelleting may be recovered in reduced shipping costs per ton and ease of use.

Soybean meal is a high-energy, high-protein feed. It is probably best purchased by the bag or by the ton in small lots because it is used in only small amounts. In most situations, no more than 1 to 2 pounds of soybean meal is needed per cow per day.

Wet brewers grain is a high-protein, medium-energy feed. The main difficulties with this feed are the high moisture content that increases the transportation cost per ton of dry matter, and the associated difficulty in storage and feeding. Wet brewers grain can be fed at up to 40 pounds/head/day.

Wheat bran or midds (middlings) are moderately high in protein and energy. These feeds are slightly different by-products of the wheat milling industry but are similar in feeding value. Wheat midds can be safely be fed at up to 8 pounds/head/day.

The most cost-effective supplemental feed is the one that provides the nutrients needed to balance the nutrients in the available forage. For growing weaned calves on a high-quality grass-legume mixture (hay or pasture), the most cost-effective feed will likely be ground-shell corn for energy. To maintain dry beef cows on low-quality hay, pelleted soy hulls will likely be the best feed. ●

Managing pastures and meadows this fall

BY ED RAYBURN

*Forage Agronomy Specialist
WVU Extension Service*

The drought has brought many livestock producers to the point of having no pasture and little hay. If late-summer and fall rains provide late-season forage growth, it will be best to have fertilized pastures and meadows to get the biggest benefit out of those rains.

Fields must have adequate nitrogen, phosphorus, potassium, and soil pH to produce the most forage from the soil moisture. Producers who have maintained medium to high soil test levels for phosphorus, potassium, and pH will need to add only nitrogen to get good grass growth once the moisture returns. Soil low in phosphorus and potassium needs to have these nutrients added. Lime is needed where pH is low, but it will not affect soil pH very much until rainfall begins.

Source of nitrogen

When selecting a nitrogen source to apply in dry weather, choose one that will not break down and evaporate. Ammonium nitrate, ammonium sulfate, diammonium phosphate, and poultry litter (with the exception of the ammonia fraction) will be stable on the soil surface until rain dissolves them and moves nitrogen into the soil. Urea fertilizer will break down and some of the nitrogen will evaporate if rain does not push it into the soil within a few days of application.

There are other considerations when deciding among these fertilizers. Ammonium sulfate will acidify the soil but may result in higher quality forage in some locations. Diammonium phosphate provides phosphorus in addition to nitrogen and is the lowest cost source of nitrogen when phosphorus is needed. Poultry litter will be slow acting compared to commercial fertilizers since it has to decompose before the nitrogen is available; however, it contains other plant nutrients and organic matter.



This summer's drought parched pastures throughout West Virginia.

Rate of fertilization

If a recent soil test is available, use the indicated recommendations for phosphate and potash fertilization. When a soil test is not available and there is reason to believe that the soil tests low for these two nutrients, apply 24 pounds of phosphate and 45 pounds of potash per ton of expected forage. If you believe that the soil tests medium for both nutrients, apply fertilizer at the forage removal rate of 12 pounds phosphate and 45 pounds potash per ton of forage to ensure adequate nutrients for maximum growth.

The rate of nitrogen to use depends on forage need and what economic risks the manager is willing to take. With normal late-summer and fall rainfall, 50 to 100 pounds of nitrogen per acre on pure grass stands will produce about 20 to 25 pounds of forage dry matter per pound of nitrogen applied. On soils low in organic matter, the response can go as high as 40 pounds of forage dry matter per pound of nitrogen applied. When the field has a high legume content, the response will drop to 10 pounds of forage per pound of nitrogen.

Choice of fields

The best response to fall nitrogen fertilization will come from grass fields on the best soils. These sites are often hay meadows. Orchardgrass will respond well to late summer nitrogen applications but needs to be grazed off before the first heavy snowfall or by December to prevent loss of forage useful to the grazing animal. Tall fescue is at its best when given late-summer nitrogen and then given late-fall to early-winter grazing. Tall fescue managed in this way will be high in sugar content and adequate in protein for dry cows and young growing cattle to gain weight on as long as there is enough forage.

Grazing management

Managed grazing will ensure that livestock get the most out of forage produced. Allow the grass stand to grow to a height adequate to ensure good root health before grazing. This is a height of 4 to 6 inches for bluegrass and 8 to 10 inches for orchardgrass and tall fescue. If rainfall is not adequate for grass to reach this height, let the forage grow until late October, when grass growth stops because of day length and cool temperatures. Use rotational grazing to get good utilization and provide controlled rest for the plants between grazings. Do not allow the livestock to graze on more acreage than they can clean up in 3 to 7 days. If managing for a grass-legume mixture, graze to a 2-inch stubble to help the legume. If managing a pure orchardgrass stand, graze to a 4-inch stubble.

Risks if there is no rain

If there is good rainfall from the middle of August, there will be a good growth response to fertilizers applied in mid-August. If there is not, the amount of forage produced will be reduced. However, there may be long-term benefits to late-summer fertilization. If there is rain by October, the fertilizer will enable the plants to grow new roots and tillers. This will strengthen the plants for winter and increase production next spring, assuming animals are not allowed to keep the plants grazed into the ground. The yield that was not produced in the fall may take the form of increased yields next spring.

Further information is available in the following WVU Extension Service fact sheets available from your county Extension office or on the World Wide Web:

Forage Fertilization Based on Yield and Management Goals
<http://www.caf.wvu.edu/~forage/5202.htm>

Nitrogen Fertilization for Early Pasture
<http://www.caf.wvu.edu/~forage/5724.htm>

Tall Fescue Management
<http://www.caf.wvu.edu/~forage/tallfesc.htm>

Plant Growth and Development as the Basis of Forage Management
<http://www.caf.wvu.edu/~forage/growth.htm>

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Managing the ewe flock with reduced feed resources

By PAUL LEWIS

Professor of Animal and Veterinary Sciences
College of Agriculture, Forestry and Consumer Sciences

The drought has placed significant pressure on the feed and water resources available for livestock. Producers need to plan now to most effectively manage and conserve those resources over the remainder of the summer months, and to have the resources necessary to carry the animals through the winter feeding period. With the duration of the drought conditions unknown, early planning and decisions regarding the management of livestock are critical. Every operation may have different options based on stocking rates, production status of the animals, total available feed resources, and the financial position and cash flow situation of the operation.

The following are some general management tips and guidelines that producers will find useful in their planning and decision-making processes regarding the ewe flock.

Reducing the number of animals and/or nutrient demands of the flock

Weaning

Wean all lambs. You have the options, depending on the average weight of these lambs, to either market these as feeder lambs or put them on feed for the slaughter lamb market. If you put the lambs on feed, you need to provide a ration that is 12%-14% protein, add a coccidiostat (Deccox, 2 lb/ton of complete feed; 2 lb/50 lb of mineral mix), deworm the lambs and vaccinate for overeating disease (C & D) 2 weeks before weaning. Maintain a deworming program as necessary.

Culling

Cull all the nonproductive and lower producing ewes from the flock. The remaining nonpregnant ewes will do fine on poorer quality pasture or low-quality hay until you get ready for breeding in the early fall. Monitor their body condition (score of 2.5 is adequate). Do not allow the ewes to lose excessive body condition. A ewe at maintenance needs a dry matter intake of only about 2% of her body weight/day (a 150-lb ewe needs 3-4 lb of hay). If necessary, you can provide 3/4 to 1 pound of whole shelled corn or barley per head as a substitute for at least half of the hay.

Deworm these ewes and maintain a deworming program as necessary until breeding. Do everything you can to limit hay feeding—use racks, feed daily, provide adequate space for all ewes, do not feed off the ground.

Flushing fall-breeding ewes

If the drought conditions continue, you will need to flush these ewes for up to 16 days before the start of your breeding season (September-October). You can do this effectively with 3/4 to 1 pound of whole shelled corn. You need to increase body condition score to 3.0 at breeding. Now is a good time to feed a free choice mineral mix.

Managing ewes lambing October-December

These ewes will do well on average quality hay before the last 4-6 weeks of pregnancy. Save the better quality hay supply to feed during these last 4-6 weeks of pregnancy and during the early lactation period. Again, it is important to monitor the body condition of these ewes and to maintain your deworming and vaccination programs.

During the last 4 weeks of gestation, you should begin to feed these ewes 1/2 to 3/4 pound of concentrate (12%-14% protein) with 3-5 pounds of your better quality hay/head/day. If you do not feed a total mixed concentrate, you should offer a free choice mineral mix at this time. Be sure to deworm the ewes prior to lambing.

Following lambing, increase the amount of concentrate up to 1 pound for singles and 1 1/2 pounds for twins. This means you need to separate the ewes at lambing for best management of feed resources. If feed resources continue to be limited, early-wean these lambs. The ewe produces 75% of her milk in the first 8 weeks of lactation. After that period, the ewe provides more companionship than nutrition for the lamb. You should consider creep feeding as a necessary component for the transition to total weaning. This helps ensure good rumen development and function of the

lamb. Again, do not forget to give the lambs a booster vaccination for overeating disease at least 2 weeks prior to weaning.

Keeping accurate records

If federal or state disaster assistance becomes available in response to the drought, records of feed and livestock inventories will be important when applying for assistance.

If you have questions or would like further information regarding these or other issues, please call one of the following:

Debi Marsh

Director
WV Sheep Project
(304) 358-3660

Paul Lewis

(304) 293-2631 ext. 3314

Corrective pruning after the 17-year cicada

By JOHN JETT

Horticulture Specialist
WVU Extension Service

Now that the 17-year cicadas have come and gone, your attention may be turning to the damage they caused to your ornamental plantings and what you can do to restore the aesthetic value of those plants.

Brood V of the periodical cicada appeared several weeks ago in the upper two-thirds of West Virginia. The damage caused during the egg-laying process of the female cicada is now evident not only in deciduous woodlots but

also on ornamental trees and shrubs around the home.

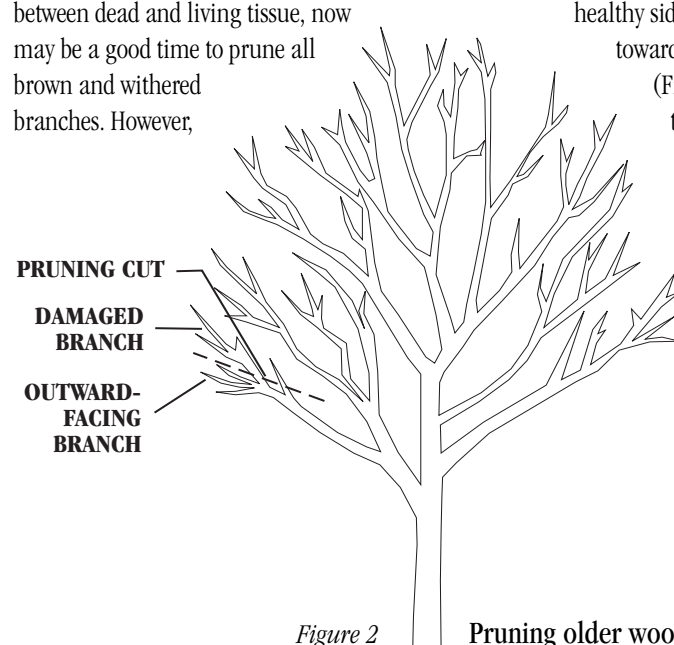
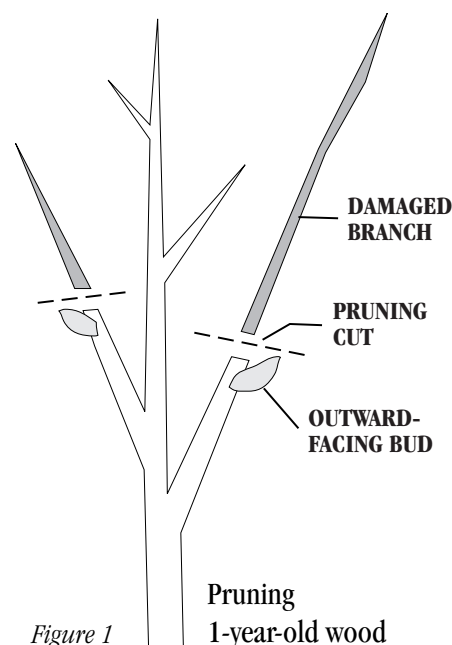
The ovipositing slits on 1- and 2-year-old wood, which partially or totally girdles these branches, cause “flagging” or breakage to the tips of these branches. With the exception of very small plants, the damage is only a brief interruption in normal plant growth, which can be put back on track with well-placed pruning cuts. Small plants with extensive branch kill may need to be replaced.

With the obvious distinction between dead and living tissue, now may be a good time to prune all brown and withered branches. However,

with drought or near-drought conditions covering Brood V terrain, it may be better to delay pruning until late fall or early spring. With additional stress on plants due to the lack of soil moisture, plant dieback may progress farther down the damaged branch.

When removing damage on 1-year-old wood, make your pruning cut into healthy tissue (determined by a green internal color) just in front of a bud facing to the outside of the plant (Figure 1). When removing 2-year-old or older wood, make your cuts just in front of healthy side branches that are growing toward the outside of the plant (Figure 2). Some additional thinning and shaping may be needed during pruning to restore the plant to its natural form.

With pruning and the development of next year's growth, the damage caused by the Brood V cicada will be “history” until the year 2016. ●



Strategies for saving drought-plagued lawns and gardens

By JOHN JETT
Horticulture Specialist
WVU Extension Service

Drought and hot, dry weather can have an adverse effect on garden and ornamental plants. When you find yourself in the middle of a drought, there are strategies to save or salvage home gardens and landscapes.

Water is lost from plants and gardens in two ways. The first way is by the evaporation of water from the soil surface. The evaporation rate increases under hot, dry and/or windy conditions. As the soil surface dries, more water from deep within the soil may be drawn to the soil surface, where it also evaporates. The second way water is removed from soil by plants is in a process called transpiration.

Most West Virginia lawns consist of cold-season grass species, which usually go dormant during the hot, dry weeks of summer and return to active growth in the fall. These lawns can be kept green and growing with proper watering, but in times of prolonged drought and limited water supplies the best approach is to let them remain dormant.

When conditions improve and grass resumes growing, there are several recommendations that should be followed.

- Mowing height—Raise the mower deck to the highest setting. This promotes deeper rooting and maintains turf quality.
- Mowing frequency—Mow less frequently. Mowing stresses the grass plants by increasing respiration and reducing root growth.
- Mower blade—Use a sharp blade. This produces a cleaner cut that heals more quickly and loses less water.
- Fertilization—Avoid nitrogen fertilizer that may stimulate excessive blade growth at the expense of root development.
- Overseeding—To improve lawn density, overseed in spring with the appropriate species.

The best way to protect ornamental plants during periods of drought is by applying mulch. Research has shown that unmulched soil may lose twice as much water to evaporation as mulched soil. Three to 4 inches of good organic mulch such as shredded bark, rotted sawdust,

Crop

Crop	Critical Period
Asparagus	Brush
Beans: lima	Pollination and pod development
Beans: snap	Flowering and pod enlargement
Broccoli, Cabbage, Cauliflower, and Lettuce	Head development
Carrots	Root enlargement
Corn	Silking and tasseling, ear development
Cucumbers, Eggplant, Peppers, and Melons	Flowering and fruit development
Potatoes, radishes, and turnips	Tuber set and enlargement
Tomatoes	Early flowering, fruit set, and enlargement

or compost will preserve soil moisture, prevent soil compaction, reduce soil temperature, and reduce water-robbing weed populations. When possible, apply water slowly to ornamental plants to achieve deep penetration that encourages deep rooting and drought tolerance. Newly planted trees and shrubs are more sensitive to dry conditions and will need frequent watering from planting time until they are well rooted.

Similar strategies can be used for vegetable and fruit crops. Most vegetables are shallow-rooted and will benefit from any practice that reduces water loss from either soil or plant.

Most vegetable crops are sensitive to drought 3 to 4 weeks before harvest and during harvest. The table lists periods of plant growth when an adequate supply of water is critical for high-quality vegetable production.

If possible, irrigate during these critical periods.

If growing conditions improve, there are several vegetables that can be grown as fall crops. Consult the *WVU Extension Service Garden Calendar* for seeding and planting dates.

And remember—all plants are more susceptible to invasion by insects and diseases when under stress. Monitor plants closely for pests and diseases and take appropriate control measures.

Critical Period

Water conservation recommendations

- Collect roof water from downspouts to use for irrigation.
- Use drip or trickle irrigation—this method wets the soil slowly and deeply. Up to 60% of irrigation water can be saved by using drip rather than overhead watering. A perforated sprinkler hose placed with the holes down makes a good drip system.
- Be sure water penetrates soil. Very dry soil is often hard to wet. Add 1 teaspoon household dish detergent as a wetting agent per 5 gallons of water.
- Irrigate in early morning when humidity is high. There will be less evaporation.
- Use mulches and/or row cover around and over plants to reduce water loss by evaporation and transpiration.
- Control weeds—they compete with crops for soil moisture and decrease yields. ●

Options for cattle management

By PHIL OSBORNE
Animal Husbandry Specialist
WVU Extension Service

- Wean calves early to maintain body condition of cows.
- If calves are lighter than normal, retain ownership and move them into custom feeding or back-grounding programs. Feed costs are favorable this year and will likely add value to the calves. A load of lighter calves (400 to 500 pounds) could be moved and sold later at 700 to 800 pounds in a Yearling Board Sale.
- Send replacement heifers to a custom heifer development program.
- Move cows to feed versus shipping feed to the cows. Producers in North Carolina, Ohio, and Illinois have had a good growing season, and an arrangement could be made to move cows to the feed and bring them home just before calving. It may be cheaper to ship cows round trip rather than ship several loads of feed.
- Test cows for pregnancy early and remove the bottom 20% to 25% if feed is critical.
- Retain or purchase genetically superior heifers and cull harder on the old or late-calving cows. Feed savings can be realized and, more important, you will improve the herd's genetic and reproductive potential.
- Pool resources with neighbors. Purchasing feed and supplies in volume can produce large savings. Marketing larger groups of calves and cows also provides additional advantages.
- Market calves and yearlings through the Special Graded Feeder Cattle Sales. These sales attract buyers from across the Corn Belt.
- Use by-product feeds to stretch the hay supply. Do not run out of hay during spring calving. Supplement early in the winter and reserve the best hay for late winter and spring.
- Do not let body condition scores drop below 4. Reproductive problems and calving difficulty are sure to follow.

For up-to-the-minute drought information,
visit Extension's Web site

<http://www.wvu.edu/~agexten/drought.htm>

WVU UPDATE

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Joyce Bower and Susan McCabe, Editors
(304) 293-4221

Jason L. Shaffer, Graphic Designer

Edmond Collins, John Jett, Ken Spence,
Wayne Wagner, David Welsh,
Editorial Planning Committee

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