

declines as forage matures and as leaf-to-stem ratio declines from grazing pressure. Minerals that are of particular concern in the predominant forage species found in the southern Great Plains include phosphorus (P), copper (Cu), zinc (Zn) and selenium. A balanced supply of macrominerals and microminerals is an important component of the overall herd health program, influencing health of weaned calves as well as reproductive success.

3. Late-summer applications of about 50 lb. per acre of nitrogen (N) can produce high-quality Bermuda grass or fescue pasture from October through December. Pastures should be grazed, hayed or otherwise mowed before the fertilizer application is made. Forage production will be highly dependent on late-summer precipitation.
4. Plan winter pasture program. Prepare seedbeds for small-grain pastures and fertilize according to soil test. Planting early (early September) ensures maximum forage production, whereas planting later enhances grain yield.
5. Treat cattle for grubs after heel fly activity ceases, between July 1 and Oct. 1 (dates will differ by region), before larvae reach the back.
6. Identify pasture weed problems to aid in planning control methods needed next spring. Adjust stocking rate and grazing system to control undesirable plants and forage accumulation for prescribed fire.
7. Evaluate cool-season pastures, commercial supplements and bulk feed commodity options for supplemental feed in winter.
8. Continue supplementation (such as the Oklahoma Gold program) for stocker and replacement heifers grazing moderate- to low-quality pasture.

Midwest Region

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September is when forages mature rapidly, weaning becomes appropriate and weather dictates several key management decisions.

Breeding season

Remove bulls after 60 days with cows, or 45 days with heifers. Never use bulls for more than a 90-day breeding season.

Herd nutrition

- ▶ Provide ample amounts of clean, fresh drinking water.
- ▶ Consider limited-intake creep-feeding if:
 - drought conditions develop and persist;
 - range conditions limit milk production;
 - creep feed and/or grain prices are relatively low; or
 - value of gain allows for economic benefits.
- ▶ Tips for successful limited-intake creep-feeding include:
 - limit duration to the last 30-75 days before weaning;
 - limit intake to less than 2 lb. per head per day;
 - use an ionophore or other feed additive to maximize efficiency;
 - keep protein levels equal to or greater than 16%; and
 - watch high salt levels; salt may help limit intake, but it can be tough on feeders.
- ▶ Prepurchase bulk-rate winter supplementation prior to seasonal price increases.

Herd health

If pinkeye is likely to be a problem, consider the following measures.

Preventive:

- ▶ Make sure the herd is receiving adequate dietary vitamins and trace minerals.
- ▶ Consider using a medicated trace-mineral package.
- ▶ Consider vaccination for pinkeye and infectious bovine rhinotracheitis (IBR).
- ▶ Control face flies.
- ▶ Clip pastures with tall, coarse grasses that may irritate eyes.
- ▶ Provide ample shade.

Therapeutic:

- ▶ Administer an intramuscular (IM) injection of long-acting oxytetracycline when symptoms are first noticed.
- ▶ Shut out irritating sunlight by patching eyes, providing shade, etc.
- ▶ Control flies.
- ▶ Consult your veterinarian.
- ▶ Consider revaccinating any show animals for respiratory diseases.
- ▶ Vaccinate suckling calves for IBR, bovine viral diarrhea (BVD), parainfluenza-3 virus (PI₃), bovine respiratory syncytial virus (BRV) and possibly pasteurized at least

three weeks prior to weaning.

- ▶ Revaccinate all calves for blackleg.
- ▶ Vaccinate replacement heifers for brucellosis (Bang's disease) at 4 to 10 months of age.
- ▶ Monitor and treat foot rot.

Forage/pasture management

- ▶ Enhance grazing distribution by placing mineral mixture away from water sources.
 - Observe pasture weed problems to aid in planning control methods for next spring.
 - Monitor grazing conditions and rotate pastures if possible and/or practical.
 - If pastures will run out in late summer, get ready to provide emergency feeds. Start supplemental feeding to extend grazing before pastures are gone.
 - Harvest and store forages properly. Minimize waste by reducing spoilage.
 - Collect samples of harvested forages and have them analyzed for nitrate and nutrient composition.
 - Plan winter nutrition program through pasture and forage management.
 - For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore (feed additive) supplement.

Reproductive management

- ▶ Remove bulls to consolidate calving season.
- ▶ Pregnancy-check and age pregnancies 60 days after the end of the breeding season.
- ▶ Consider culling cows that are short-bred.

These methods contribute to a more uniform calf crop, make winter nutritional management easier and increase the success rate of next year's breeding season.

General management

- ▶ Avoid unnecessary heat stress. Don't handle and/or truck cattle during the heat of the day.
- ▶ Repair, replace and improve facilities needed for fall processing.
- ▶ Order supplies, vaccines, tags and other products needed at weaning time.
- ▶ Consider early weaning if:
 - drought conditions develop and persist;
 - range conditions limit milk production;
 - cows are losing body condition;

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- calf and cull cow prices indicate maximum profit; or
- facilities and management are available to handle lightweight calves.
- ▶ Remember, first-calf heifers have the most to gain from early weaning.
- ▶ Resist the temptation to feed cows without weaning; feeding early-weaned calves is more efficient.
- ▶ Look for unsound cows that need to be culled from the herd.
- ▶ Prepare to have your calf crop weighed and analyzed through your state, regional or breed performance-testing program.
- ▶ Document cost of production by participating in Standardized Performance Analysis (SPA) programs.
- ▶ Plan your marketing program, including private-treaty sales, consignment sales, test stations, production sales, etc.

Northwest Region

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Preconditioning/weaning


- ▶ Obtain and properly store vaccines to

complete a comprehensive calf health program.

- ▶ Make sure corrals, working facilities and scales are in proper working order.
- ▶ Recognize that stress is the leading precursor to BRD complex, or shipping fever, in weaned calves. Stress can be realized from emotional, environmental, nutritional and social events.
- ▶ Prepare to reduce calf stress with proper management. Stress management includes not allowing calves to hear their mothers after weaning unless using a fenceline weaning method; reducing dust in corrals; providing adequate bunk space and clean, cool water (running water may improve water intake); and providing quality forages that are highly palatable. Placing panels at right angles to fencelines can reduce the time calves spend walking fencelines. To reduce social dominance issues, try not to mix calves from different pastures when weaning.
- ▶ Prepare a comprehensive calf vaccination/preconditioning program with your health professional. This vaccination program will vary with cattle management options and potential calf health risks.
- ▶ Prevent vaccination failure, which can occur when vaccines are at any time

(during shipping, storage or at chuteside) exposed to warm temperatures and direct sunlight, or improperly mixed and administered. The animals' own immune responses will be compromised if they are not vigorous and healthy when vaccinated or if the vaccine label directions are not strictly followed, including injection method and interval between boosters.

Cow management

- ▶ Identify cows as cull candidates due to disposition, offspring performance, age, udder quality and pregnancy status. Historically, cull cows sell at a premium in September as compared to the later fall months. Cull cow value can also be increased by feeding thin cows for 30 to 60 days to increase body weight and condition.
- ▶ Mature dry cows in the late second trimester and early third trimester have their lowest nutrient requirement of the year. Make use of lower-quality feeds at this time or manage thin cows to regain lost body condition. 

Editor's Note: *Thomas Hill has left Oregon State University for a private industry position. This column is his final contribution to the Angus Journal.*