

TENNESSEE BEEF INTEGRATED RESOURCE MANAGEMENT CALENDAR

2019



BEEF INTEGRATED RESOURCE MANAGEMENT CALENDAR



The Beef Integrated Resource Management is a system that utilizes all resources available to optimize production and net income.

This calendar has been developed to assist you in formulating an overall management plan for your beef operation.

Utilize the calendar to schedule various management practices and farm-related activities.

TENNESSEE BEEF IRM COORDINATING COMMITTEE

Justin Rhinehart, UT Extension Beef Cattle Specialist

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Appreciation is expressed to the University of Kentucky Beef IRM Coordinating Committee for allowing use of its Beef Integrated Resource Management Calendar in Tennessee.

INTRODUCTION

The following instructions will guide you through the process of customizing your Beef Integrated Resource Management Calendar. The University of Tennessee Extension publications referred to in this calendar are available at your local county UT Extension office and UTBEEF.COM.

KEYS TO MAXIMUM BENEFIT

Having a planned breeding/calving season and the availability of handling or working facilities are very important to getting the most from the Beef IRM Calendar. Neither is essential for using the calendar. Both a planned breeding/calving season and handling facilities would be good goals if they are lacking on your farm.

RECORD KEEPING FOR PROCESS VERIFICATION PROGRAM

To participate in Process Verification marketing programs, records must be maintained that show the birth dates of the first and last calf born in a calving group. Using the calendar to write the identification number of these calves on the appropriate date on the calendar should serve as the official record for the program. Although not required, it is recommended that the birth date and other appropriate information for each calf be kept on the record sheets in the back of this calendar.

SETTING GOALS AND FINDING LIMITING FACTORS

Although not necessary for customizing your Beef IRM Calendar, spending some time on the following will help to develop a stronger farm plan. As a result, the planning done on this calendar will be more focused on the specific areas that most need improvement.

- Set personal and business goals.
- Determine limitations to meeting your goals and getting the maximum benefit from your beef/forage operation. The following are some, but not all, areas to consider:
 - Cattle limitations: herd health, genetic potentials, nutritional status, reproductive status and marketing.
 - Forage limitations: soil type, fertility, land use, forage resources, hay quality, grazing system and match of forage resources to monthly animal needs.
 - Financial and management limitations: available credit, knowledge of financial position and management skills.

CUSTOMIZING THE BEEF IRM CALENDAR

GENERAL ASSUMPTIONS FOR RECOMMENDATIONS

Spring-calving cows are bred to calve beginning January 1, with first calf heifers beginning approximately 30 days earlier. Fall-calving cows are bred to calve beginning October 1. Local veterinarians should be consulted to develop appropriate health programs. All practices should be carried out according to label and Beef Quality Assurance (BQA) recommendations. Four general working opportunities should be considered: Pre-breeding, Pre-weaning, Weaning and Mid-summer.

STEP 1. DEFINE THE CALVING PERIOD YOU EXPECT

These dates are based on the breeding season that you used last year:

- Write “Calving season begins” on calendar.
- Write “Calving season ends” on calendar.

STEP 2. DEFINE THE CALVING PERIOD

Define the desired calving period you want the current year. Find these “due dates” using the Gestation Table at the end of this calendar. For example, if you want your calves to begin coming on March 1, you will find this “due date” corresponds to a breeding date of May 22. Therefore, you should begin your breeding season on May 22. Some dates are included in the calendar itself for convenience. (Caution: You should not go from year-round to short-season calving in one year):

- Write “Put bulls with cows” on calendar.
- Write “Calving season begins” on calendar.
- Write “Remove bulls from cows” on calendar.
- Write “Calving season ends” on calendar.

STEP 3. TAKE CARE OF BULL/SEMEN NEEDS

At least 45 days prior to breeding season, purchase bulls (tested for breeding soundness) and/or order semen. Get a Breeding Soundness Evaluation on natural service sires:

- Write “Buy bull(s)” on calendar.
- Write “Order semen” on calendar.
- Write “Breeding Soundness Evaluation for bulls” on calendar.

STEP 4. DECIDE HOW MANY TIMES AND WHEN TO WORK CATTLE

Suggest working periods:

- Pre-breeding or turn-out (most important working, but can be done at any time prior to putting the bulls with the cows).
- Mid-July (good time to deworm and implant).
- Pre-weaning* (usually done 3 to 4 weeks prior to weaning).
- Weaning* (unless you sell at weaning).
- Write the appropriate management practice on the calendar (e.g., preweaning working).

STEP 5. FORAGE MANAGEMENT PLANNING

Place appropriate forage-related information on calendar:

- “Soil test” (fall).
- “Apply fertilizer” (March/April or October/November, except for N for stockpiled fall pasture).
- “Nitrogen application for fall-stockpiled pasture” (late August to early September).
- “Sample hay for quality” (August to October).
- “Pasture renovation with clover” (February for frost-seeding or later if drilling).
- “Remove cattle from fields to be fall stockpiled” (late August to early September).
- “Take first cutting of alfalfa hay” and, “take first cutting of other hay” (first cutting of grasses and legumes usually should come in the first two weeks of May).
- “Take last cutting of alfalfa hay” (usually before mid-September).
- “Start feeding higher quality hay for last trimester” (November 1 for January-calving cows).

STEP 6. ECONOMIC PRACTICES

Place economic information on calendar:

- Inventory the beef herd (usually January).
- Estimate annual quantities of inputs (January).
- Arrange for line of credit (January-March). Have employees complete I-9 and W-4 forms on their first day of employment.

Beginning of business year:

- Arrange for a line of operating credit for the beef enterprise. A monthly cash flow estimate will be useful in determining the line of credit.
- Inventory the resources (land, labor, capital, management) available for the beef enterprise. Prepare a budget to determine the cost of producing a calf. This will assist in marketing the calves at a profitable level.
- Set goals that include financial and production aspects of the beef cow/calf enterprise. Keep financial records monthly to monitor profitability and cash flow.
- Determine the annual quantities of feed, medication and other inputs needed. Negotiate an annual price for each of the required inputs and then schedule different delivery dates prior to the time products are needed.

Every month:

- Record all cow purchases, sales, deaths and movements among pastures.

End of year:

- Prepare an income statement and balance sheet as of the last day of the business year. Determine if the financial and production goals set forth in the beginning of the year were met.
- Purchase insurance to protect assets against wind, fire, theft, flood, lightning, liability, collision, etc.

STEP 7. RECORD KEEPING

- Complete the Individual Calf Record Forms located in the appendix pages of this calendar.

THE BULL TEST STATION

The University of Tennessee Bull Test Station is located at the Middle Tennessee AgResearch and Education Center and in cooperation with UT Extension and TSU Cooperative Extension. Data on individual bulls will be available prior to the sale, and prospective buyers may view bulls at the annual Open House, as well as on a video that will be made available across the state during the sale so that prospective buyers need not travel to Spring Hill for the actual sale.

Purpose of the Bull Testing Station:

- To provide a standard, impartial post-weaning gain test that will furnish records which will be useful to the consignor in his breeding program.
- To provide a source of and market for completely performance tested bulls.
- To serve as an educational tool to beef cattle improvement and promotion.

Contact: David Kirkpatrick, UT Extension Beef Cattle Specialist, 865-974-7294, fkirkpat@utk.edu

TENNESSEE BEEF HEIFER DEVELOPMENT PROGRAM

The Tennessee Beef Heifer Development Program is to incentivize the repopulation of the beef herd through custom heifer development. It will be accomplished by the implementation of management practices with access to more productive replacement females allowing for more rapid expansion of Tennessee's beef herd. This will improve the longevity of these females, decreasing turnover and providing for exponential improvement in genetics and associated revenue generation.

The program is a partnership of the University of Tennessee Institute of Agriculture, the Tennessee Department of Agriculture and the Tennessee Farmer's Cooperative designed to:

- Increase the opportunity for custom replacement heifer development.
- Demonstrate proper replacement heifer development to beef cattle producers in Tennessee.
- Increase the implementation of heifer development practices that will result in optimum reproductive efficiency as mature cows.
- Demonstrate management techniques necessary for replacement heifers to reach target weights and breed successfully.
- Demonstrate methods of evaluating heifers for disposition, performance, and reproductive traits.

Contact: Justin Rhinehart, UT Extension Beef Cattle Specialist, 931-486-2129, jrhinehart@utk.edu

JANUARY

SPRING-CALVING HERD

Calving season begins

- Supplement with magnesium mineral at least 30 days prior to calving.
- Increase feed to cows that have calves. Grain may be needed if you are feeding lower quality hay (3 to 4 pounds for mature cows and about 8 pounds for first-calf heifers).
- Have calving equipment, facilities and labor arranged prior to calving.
- Observe cows closely now, since they should begin calving January 1. Expect calving difficulty and intervene if:
 - No progress after 90 minutes of labor.
 - Calf is backwards (only the calf's tail is visible or the dew claws are pointed "up").
 - Calf's head and two feet are not visible.
- Identify calf with an ear tag, tattoo or both while it is young and easy to handle. Record dam ID and birth date. Commercial male calves should also be castrated and implanted according to product recommendations. Castration and dehorning are less stressful when performed on young animals. Registered calves should be weighed during the first 24 hours.
- Inform tax preparer of sales of un-bred heifers in the breeding pool because they are considered breeding livestock by the IRS.
- Call AI technicians for spring breeding appointments.
- Start making bull selections. Place order for semen if needed.
- Record the identification number of the first calf born on the appropriate calendar date to serve as a record for the Process Verified Program (PVP).

CONSIDERATIONS FOR ALL CATTLE

- Feed hay in areas where mud is less of a problem.
- Increase feed provided as the temperature drops.
- Provide clean water at all times. Be aware of the hazards of frozen ponds.
- Begin looking for herd sire replacements that meet herd and farm goals. Yearling bull availability is best in late winter and spring.

FALL-CALVING HERD

Breeding season ends

- Cows nursing calves need 25 to 30 pounds of good-quality hay, or its equivalent, throughout the breeding season.
- Remove bulls February 28 to end the breeding season for the last calves born by December 8.
- Consider creep-feeding or creep-grazing of small grain pastures to add extra pounds, since calves need more than just their dam's milk for maximum growth. Maintain high-quality forage for cows for good body condition, milk production and calf gains.
- Finish castrating, dehorning and implanting.
- Provide clean windbreaks and shelter for young calves.

FORAGES

- Prepare for pasture renovation by purchasing seeds, inoculant, etc., and getting equipment ready.
- Determine the need for N fertilization of selected grass pasture fields for early-spring growth.
- Access hay quality and inventory.
- Allocate hay feeding based on animal needs and hay quality.
- Determine varieties to be used for renovation.
- Plan pasture utilization strategy (fencing, water, shade).



JANUARY 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Due Oct 11	2 Due Oct 12	3 Due Oct 13	4 Due Oct 14	5 Due Oct 15
6 Due Oct 16	7 Due Oct 17	8 Due Oct 18	9 Due Oct 19	10 Due Oct 20	11 Due Oct 21	12 Due Oct 22
<i>American Forage and Grassland Council Annual Conference in St. Louis, MO</i>						
13 Due Oct 23	14 Due Oct 24	15 Due Oct 25	16 Due Oct 26	17 Due Oct 27	18 Due Oct 28	19 Due Oct 29
20 Due Oct 30	21 Due Oct 31	22 Due Nov 01	23 Due Nov 02	24 Due Nov 03	25 Due Nov 04	26 Due Nov 05
					<i>Tennessee Cattlemen's Association Annual Convention and Tradeshow in Murfreesboro, TN</i>	
					<i>UT Senior Bull Sale in Spring Hill, TN</i>	
27 Due Nov 06	28 Due Nov 07	29 Due Nov 08	30 Due Nov 09	31 Due Nov 10	UTBEEF.COM	
			<i>National Cattlemen's Beef Association Convention & Tradeshow in New Orleans, LA</i>			

FEBRUARY

SPRING-CALVING HERD

Spring-calving continues

- Identify calf with ear tag, tattoo or both while it is young and easy to handle. Record dam ID and birth date. Commercial male calves should also be castrated and implanted according to product recommendations. Castrating and dehorning are less stressful when performed on young animals. Registered calves should be weighed during the first 24 hours.
- Watch for calf scours:
 - Give fluids to scouring calves that become dehydrated.
 - Consult your veterinarian for proper diagnosis and treatment.
 - Move cows that are approaching calving to a clean pasture.
- Vaccinate calves (should be 12 weeks of age or older) for clostridial diseases (blackleg) according to label recommendations.
- Separate cows that have calves and increase their feed.
- Continue grass tetany prevention. Cows need 20 grams of magnesium daily or 4 ounces per day of a 15 percent magnesium mineral mix.
- Line up AI sires and/or purchase new bulls at least 30 days before the breeding season. Demand performance records and check health history including immunizations. Choose a breed and use EPDs plus visual observation to select the bull that best fits your production and marketing program.
- Evaluate yearling replacement heifers for structural soundness, genetic value, and weight. Heifers should reach their target weight of 65 percent of expected mature weight by breeding season.

CONSIDERATIONS FOR ALL CATTLE

- Secure herd sire replacements that meet herd and farm goals. Yearling bull availability is best in late winter and spring.

FALL-CALVING HERD

Breeding season begins

- Breeding season should end February 28.
- Remove bulls and feed to regain “normal” weight and condition.
- If economical, provide creep for calves.
- Provide windbreaks or clean shelter for calves.
- Vaccinate heifer calves for Brucellosis according to your veterinarian’s recommendation (optional).
- Consult your veterinarian for proper deworming of the fall-calving herd.

FORAGES

- Soil test your hay fields and pastures. Apply phosphate, potash and lime according to soil test recommendation to the species and management.
- Begin pasture renovation with legumes.
- Apply nitrogen fertilizer by mid- to late February to promote early grass growth.
- Plan pasture utilization strategy (fencing, water, shade).
- Consider herbicide options such as dormant applications for alfalfa.



FEBRUARY 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
UTBEEF.COM					1 Due Nov 11	2 Due Nov 12	
					<i>NCBA Continued New Orleans, LA</i>		
3 Due Nov 13	4 Due Nov 14	5 Due Nov 15	6 Due Nov 16	7 Due Nov 17	8 Due Nov 18	9 Due Nov 19	
10 Due Nov 20	11 Due Nov 21	12 Due Nov 22	13 Due Nov 23	14 Due Nov 24	15 Due Nov 25	16 Due Nov 26	
			<i>National Farm Machinery Show in Louisville, KY</i>				
17 Due Nov 27	18 Due Nov 28	19 Due Nov 29	20 Due Nov 30	21 Due Dec 01	22 Due Dec 02	23 Due Dec 03	
24 Due Dec 04	25 Due Dec 05	26 Due Dec 06	27 Due Dec 07	28 Due Dec 08			

MARCH

SPRING-CALVING HERD

- Prepare for breeding season
 - Line up AI services and/or purchase replacement bulls at least 45 days prior to the start of the breeding season.
 - Choose a breed and use EPDs, visual observation, and DNA marker analysis (if available) to select the bull that best fits your program's production and marketing goals.
 - Have a veterinarian perform breeding soundness evaluations on bulls.
 - If you are going to use artificial insemination and/or estrus synchronization, make plans now and order needed supplies and semen.
 - Make final selection of heifer replacements based on weight and genetic merit.
 - Spring or "turn-out" working is usually scheduled for late April or May. Consult your veterinarian about vaccines and health products your herd needs (see April for suggestions).
 - Continue providing magnesium in the mineral mix until daytime temperatures are consistently above 60 F.
 - Identify calf with an ear tag, tattoo or both while it is young and easy to handle.
 - Record dam ID and birth date. Commercial male calves should also be castrated and implanted according to product recommendations. Castrating and dehorning are less stressful when performed on young animals. Registered calves should be weighed during the first 24 hours.
 - Begin breeding replacement heifers for "head-start" calving. Mate to known easy-calving bulls.
 - Record the identification number of the last calf born on the appropriate calendar date to serve as a record for the PVP Program.

CONSIDERATIONS FOR ALL CATTLE

- Repair fences, equipment and handling facilities.
- Plan new working facilities, if needed.

FALL-CALVING HERD

Prewearing period

- Consult your veterinarian about a preweaning working of the herd, which may include:
 - Vaccinating calves for:
 - IBR-PI₃-BVD-BRSV
 - Hemophilus somnus*
 - Clostridial diseases (blackleg)
 - Deworming calves
- Calves intended for feeders should be re-implanted.
- Consider the economics of creep-feeding calves with grain or high-quality forage.
- Marketing: Make an economic analysis of all marketing options for calves, including selling at auction barn, video and private treaty. Another option is retained ownership, either by backgrounding or sending the calf to the feedlot.

FORAGES

- Soil test your hay fields and pastures. Apply phosphate, potash and lime according to soil test recommendation to the species and management.
- Complete renovations by March 15.
- Smooth and reseed hay feeding areas and heavy traffic areas.
- Control competition from grasses with young clover plants by grazing or mowing as needed.
- Prepare for spring seeding of alfalfa.
- If growth permits, begin grazing.
- Plan and implement grazing system and rotation.



MARCH 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
UTBEEF.COM					1 Due Dec 09	2 Due Dec 10
3 Due Dec 11	4 Due Dec 12	5 Due Dec 13 <i>Tennessee Forage & Grassland Council Annual Meeting in Jackson, TN</i>	6 Due Dec 14	7 Due Dec 15	8 Due Dec 16	9 Due Dec 17
10 Due Dec 18	11 Due Dec 19	12 Due Dec 20	13 Due Dec 21	14 Due Dec 22	15 Due Dec 23	16 Due Dec 24
17 Due Dec 25	18 Due Dec 26	19 Due Dec 27	20 Due Dec 28	21 Due Dec 29	22 Due Dec 30	23 Due Dec 31
24 Due Jan 01	25 Due Jan 02	26 Due Jan 03	27 Due Jan 04	28 Due Jan 05	29 Due Jan 06	30 Due Jan 07
31 Due Jan 08						

APRIL

SPRING-CALVING HERD

Breeding season begins

- Begin breeding cows no later than April 1, especially if they are on high-endophyte fescue. Use best-quality pastures during the breeding season. If possible, avoid high-endophyte fescue pastures during breeding.
- Record inventory of all cows in each breeding pasture.
- Spring or “turn-out” working. Consult your veterinarian on the vaccines and health products for your herd. These may include:
 - Deworming calves.
 - Vaccinating cows for Vibrio, Lepto (5-way), IBR, BVD and *Hemophilus somnus*.
 - Vaccinating calves for Clostridial disease (blackleg) and *Hemophilus somnus*.
- Dehorn, castrate and implant calves if not already completed.
- Continue supplying supplemental magnesium until daytime temperatures are consistently above 60 F.

CONSIDERATIONS FOR ALL CATTLE

- Continue supplemental feeding as needed.

FALL-CALVING HERD

Prewearing period

- Pregnancy check: Consider selling open cows and heifers and those weaning poor calves. Inform tax preparer if the cows and heifers were raised or purchased.
- Finish vaccinations of calves (see March).
- Calves intended for feeders should be re-implanted.
- Marketing: Make an economic analysis of all marketing options for calves, including selling at auction barn, video and private treaty. Another option is retained ownership, either by backgrounding in a grazing program or sending the calf to the feedlot.
- Obtain cow and calf weights at weaning and see your UT Extension County Agent for information on record-keeping programs. Cull cows based on performance and pregnancy status and make initial heifer selections, keeping more than you intend to retain for the next breeding season.

FORAGES

- Complete seeding of alfalfa.
- Determine need for supplemental summer forages such as millet or Sudan grass.
- Prepare for start of hay harvest.
- Prepare fencing, and water for grazing season and begin grazing early pastures.
- Plant corn for silage and warm-season grasses if weather permits.
- Assess opportunity for weed control using recommended herbicides (always read and follow label recommendations).



APRIL 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Due Jan 09	2 Due Jan 10	3 Due Jan 11	4 Due Jan 12	5 Due Jan 13	6 Due Jan 14
7 Due Jan 15	8 Due Jan 16	9 Due Jan 17	10 Due Jan 18	11 Due Jan 19	12 Due Jan 20	13 Due Jan 21
14 Due Jan 22	15 Due Jan 23	16 Due Jan 24	17 Due Jan 25	18 Due Jan 26	19 Due Jan 27	20 Due Jan 28
21 Due Jan 29	22 Due Jan 30	23 Due Jan 31	24 Due Feb 01	25 Due Feb 02	26 Due Feb 03	27 Due Feb 04
28 Due Feb 05	29 Due Feb 06	30 Due Feb 07	UTBEEF.COM			

MAY

SPRING-CALVING HERD

Breeding season continues

- Utilize breeding pastures that do not contain high levels of endophyte if possible.
- Observe performance of bulls during breeding season. If the number of cows returning to estrus is large, try to determine the cause and consider changing bulls.
- Maintain mineral feeders. Provide a free-choice mineral mix containing adequate levels of phosphorus, vitamin A, selenium, copper, zinc and other trace minerals at all times.

CONSIDERATIONS FOR ALL CATTLE

- Don't start fly control until population builds up.
- Consider vaccinating for pinkeye.

FALL-CALVING HERD

Weaning period

- Weaning Working:
 - Give any necessary booster vaccinations to calves.
- Obtain cow and calf weights at weaning and see your UT Extension County Agent for information on record keeping programs. Cull cows based on performance and pregnancy status. Make initial heifer selections, keeping more than you intend to retain for the next breeding season.
- Pregnancy test cows if not previously done.
- Creep graze calves or wean and put on best pasture. If calves are weaned, restrict pasture access for cows.
- Weaned calves can be conditioned by feeding a complete dry ration for a short period of time after vaccinating, deworming and implanting.

FORAGES

- Start hay harvest to ensure adequate quality.
- Seed warm-season annuals for supplemental forage as needed.
- Seed warm-season perennial grasses.
- Clip seed heads to prevent seed head formation on fescue and to control weeds as needed. Consider herbicide options.
- Rotate pastures as needed.



MAY 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
<p style="text-align: center;">UTBEEF.COM</p>			1 Due Feb 08	2 Due Feb 09	3 Due Feb 10	4 Due Feb 11
			5 Due Feb 12	6 Due Feb 13	7 Due Feb 14	8 Due Feb 15
12 Due Feb 19	13 Due Feb 20	14 Due Feb 21	15 Due Feb 22	16 Due Feb 23	17 Due Feb 24	18 Due Feb 25
	<i>Tennessee Beef Heifer Development Center Fall-born Heifer Pickup</i>					
19 Due Feb 26	20 Due Feb 27	21 Due Feb 28	22 Due Mar 01	23 Due Mar 02	24 Due Mar 03	25 Due Mar 04
26 Due Mar 05	27 Due Mar 06	28 Due Mar 07	29 Due Mar 08	31 Due Mar 10		

JUNE

SPRING-CALVING HERD

Breeding season is almost over

- Continue pasture rotation and avoid high-endophyte fescue during this month for best rebreeding performance.
- Remove bulls from the cow herd by the end of the month. This will eliminate summer-born calves and help prevent nursing heifer calves from becoming pregnant.
- Midsummer working opportunity (when the herd is gathered to remove bulls):
 - To avoid heat stress, work cattle early in the morning.
 - Consider deworming cows and calves (mid-July is optimum)
 - Re-implant calves.
 - Vaccinate calves for clostridial diseases (blackleg) if not done previously.
 - Spray for flies while cattle are gathered (if not using other control methods).

CONSIDERATIONS FOR ALL CATTLE

- Prevent/control pinkeye:
 - Clip tall, mature grass.
 - Reduce flies with adequate fly control.
 - Treat problems quickly.
 - Consider vaccinating.
- Control flies. Methods may include:
 - Back rubbers, spray, dust bags, pour-ons.
 - Insecticide ear tags (two per animal).
 - Salt-mineral mix containing oral larvicide.
- Maintain a clean water supply and check it routinely. Water is extremely important in hot weather.

FALL-CALVING HERD

Weaning period

- Finish collecting cow and calf weights at weaning.
- Pregnancy test cows if not done previously.
- Consider selling open cows and heifers, cows weaning lightweight, poor-quality calves and problem cows. Inform tax preparer if the cows and heifers were raised or purchased.
- Make initial selection of replacement heifers.

FORAGES

- Continue hay harvests.
- Clip pastures for weeds and seed heads as needed.
- Rotate pastures as needed.
- Protect round bales of hay from weather damage to minimize storage losses of yield and quality.



JUNE 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
UTBEEF.COM						1 Due Mar 11
2 Due Mar 12	3 Due Mar 13	4 Due Mar 14	5 Due Mar 15	6 Due Mar 16	7 Due Mar 17	8 Due Mar 18
9 Due Mar 19	10 Due Mar 20	11 Due Mar 21	12 Due Mar 22	13 Due Mar 23	14 Due Mar 24	15 Due Mar 25
16 Due Mar 26	17 Due Mar 27	18 Due Mar 28	19 Due Mar 29	20 Due Mar 30	21 Due Mar 31	22 Due Apr 01
23 Due Apr 02	24 Due Apr 03	25 Due Apr 04	26 Due Apr 05	27 Due Apr 06	28 Due Apr 07	30 Due Apr 09
				<i>Tabacco, Beef & More Field Day in Springfield, TN</i>		

JULY

SPRING-CALVING HERD

Breeding season ends

- Bulls should be removed from the cow herd, grouped together in a pasture with good fence and allowed to regain “normal” weight and condition.
- Manage to minimize the effect of high-endophyte level in fescue. Pasture, other than fescue, can be beneficial this month.
- Watch pastures! If pasture is running short, start supplemental feeding.
- Check pastures for poisonous plants.
- Creep-graze or advance-graze calves, providing them with the best forages available.
- Repair and improve corrals for fall working and weaning.
- Consider limited creep-feeding during last summer.

CONSIDERATIONS FOR ALL CATTLE

- Continue to watch for pinkeye and treat if necessary. Minimize problems by clipping pastures, controlling face flies and providing shade.
- Check pastures for downed wild cherry trees after storms (wild cherry leaves can be toxic to cattle).
- Be sure that clean water is always available, especially in hot weather.

FALL-CALVING HERD

Dry period

- Fall-calving cows should be dry and pregnant. Their nutrient needs are minimal and they can be maintained on lower-quality pasture to avoid over conditioning.
- Keep a good free-choice mineral mix available at all times.
- Get ready for fall-calving and plan to have good pasture available for fall-calving.
- Replacement heifers should gain at an adequate rate to reach their “target” breeding weight (65 percent of mature size) by November 25.
- Consider deworming cows.

FORAGES

- Identify fescue pastures for accumulation of fall growth (stockpiling).
- Attend county, regional and state field days for timely information.
- Clip pastures as needed.
- Assess need for weed control in alfalfa.
- Determine species and varieties to be seeded in fall.



JULY 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1 Due Apr 10	3 Due Apr 11	3 Due Apr 12	4 Due Apr 13	5 Due Apr 14	6 Due Apr 15
7 Due Apr 16	8 Due Apr 17	9 Due Apr 18	10 Due Apr 19	11 Due Apr 20	12 Due Apr 21	13 Due Apr 22
	<i>Tennessee Beef Heifer Development Center Fall-born Check in</i>			<i>Summer Celebration in Milan, TN</i>		
14 Due Apr 23	15 Due Apr 24	16 Due Apr 25	17 Due Apr 26	18 Due Apr 27	19 Due Apr 28	20 Due Apr 29
21 Due Apr 30	22 Due May 01	23 Due May 02	24 Due May 03	25 Due May 04	26 Due May 05	27 Due May 06
28 Due May 07	29 Due May 08	30 Due May 09	31 Due May 10	UTBEEF.COM		

AUGUST

SPRING-CALVING HERD

- Manage to minimize the effect of high endophyte level in fescue. Pasture, other than fescue, can be beneficial this month.
- Watch pastures! If pasture is running short, start supplemental feeding.
- Watch for poisonous plants in pastures.
- Creep-graze or advance-graze calves, providing them with the best forages available.
- Repair and improve corrals for fall working and weaning.
- Consider limited crop-feed during late summer.

CONSIDERATIONS FOR ALL CATTLE

- Provide shade and water. Check water supply frequently — as much as 20 gallons may be required by high-producing cows in very hot weather.
- Don't give up on fly control. Methods may need to be combined (i.e., spraying of "tagged" cattle) in late summer.
- Keep a good mineral mix available at all times. Provide a free-choice mineral mix containing adequate levels of phosphorus, vitamin A, selenium, copper, zinc and other trace minerals.

FALL-CALVING HERD

Dry period

- Fall-calving cows should be dry and pregnant. Their nutrient needs are minimal and they can be maintained on lower-quality pasture to avoid over conditioning. Keep a good free-choice mineral mix available at all times.
- Get ready for fall-calving and plan to have good pasture available.
- Inform tax preparer of sales of un-bred heifers in the breeding pool because they are considered breeding livestock by the IRS.
- Determine breed and type bull needed for next breeding season.

FORAGES

- Remove livestock and apply nitrogen to fescue pastures to be stockpiled.
- Fertilize alfalfa and other hay/pasture fields as needed.
- Plant perennial grasses at optimal rate, date and depth.
- Harvest corn silage.
- Secure desired varieties for late-summer seeding.



AUGUST 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
UTBEEF.COM				1 Due May 11	2 Due May 12	3 Due May 13
4 Due May 14	5 Due May 15	6 Due May 16	7 Due May 17	8 Due May 18	9 Due May 19	10 Due May 20
		<i>Steak and Potatoes Field Day in Crossville, TN</i>				
		<i>Tennessee Beef Heifer Development Center Spring-born Heifer Pickup</i>				
11 Due May 21	12 Due May 22	13 Due May 23	14 Due May 24	15 Due May 25	16 Due May 26	17 Due May 27
18 Due May 28	19 Due May 29	20 Due May 30	21 Due May 31	22 Due Jun 01	23 Due Jun 02	24 Due Jun 03
25 Due Jun 04	26 Due Jun 05	27 Due Jun 06	28 Due Jun 07	29 Due Jun 08	30 Due Jun 09	31 Due Jun 10

SEPTEMBER

SPRING-CALVING HERD

Preweaning working

- Consult your veterinarian on the merits of a preweaning working of the herd, which may include:
 - Vaccinating calves for:
 - IBR-PI₃-BVD-BRSV.
 - *Hemophilus somnus*.
 - Clostridial diseases (blackleg).
 - Pregnancy examination of the cows.
 - Treatment of cows for grubs and lice.
 - Deworm if retaining calves more than 30 days.
- Creep-feeding may give extra gain and prepare calves for eating dry feed at weaning.
- Marketing: Make an economic analysis of limit feeding and of all marketing options for calves including selling at auction barn, video and private treaty. Another option is retained ownership, either by backgrounding or sending the calf to the feedlot.

CONSIDERATIONS FOR ALL CATTLE

- Don't give up on fly control. Methods may need to be combined (i.e., spraying of "tagged" cattle) in late summer.
- Keep a good mineral mix available at all times. Provide a free-choice mineral mix containing adequate levels of phosphorus, vitamin A, selenium, copper, zinc and other trace minerals.

FALL-CALVING HERD

Prepare for calving

- Pregnant cows should be moved to better pastures as calving approaches.
- Observe first-calf heifers closely now, since they should begin head-start calving by September 10. Expect calving difficulty and intervene if:
 - No progress after 90 minutes of labor.
 - Calf is backwards (only the calf's tail is visible or the dewclaws are pointed "up").
 - Calf's head and two feet are not visible.
- Arrange for enough labor to assist during the calving period.
- Inform tax preparer of sales of unbred heifers in the breeding pool because they are considered breeding livestock by the IRS.
- Get equipment ready for calving season (may include):
 - Puller and chains, ear tags, record book and scales.
- Determine breed and type bull needed for next breeding season.

FORAGES

- Continue taking soil samples for perennial crops and apply fertilizer as needed.
- Plant perennial grasses at optimal rate, date and depth.
- Harvest hay as needed.
- Continue harvest of corn silage.



SEPTEMBER 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Due Jun 11	2 Due Jun 12	3 Due Jun 13	4 Due Jun 14	5 Due Jun 15	6 Due Jun 16	7 Due Jun 17
8 Due Jun 18	9 Due Jun 19	10 Due Jun 20	11 Due Jun 21	12 Due Jun 22 <i>Horse Management Field Day in Knoxville, TN</i>	13 Due Jun 23	14 Due Jun 24
15 Due Jun 25	16 Due Jun 26	17 Due Jun 27 <i>Horse Management Field Day in Spring Hill, TN</i>	18 Due Jun 28	19 Due Jun 29 <i>Horse Management Field Day in Grand Junction, TN</i>	20 Due Jun 30	21 Due Jul 01
22 Due Jul 02	23 Due Jul 03	24 Due Jul 04	25 Due Jul 05	26 Due Jul 06	27 Due Jul 07	28 Due Jul 08
29 Due Jul 09	30 Due Jun 10	UTBEEF.COM				

OCTOBER

SPRING-CALVING HERD

Wean the calves

- Give any necessary booster vaccinations to calves.
- Consider selling open cows and heifers and those weaning poor calves. Inform tax preparer if the cows and heifers were raised or purchased.
- Put thin cows (body condition score less than 5) on high-quality feed or pasture, such as accumulated tall fescue.
- Obtain cow and calf weights at weaning and see your UT Extension County Agent for information on record keeping programs. Cull cows based on performance and pregnancy status and make initial heifer selections, keeping at least 15 percent more than you intend to retain for the next breeding season.
- Keep back the best of the heifer calves born during the first half of the calving season as replacements.
- Plan your calf marketing program. Alternatives include:
 - Special feeder calf sales.
 - Weekly auction markets.
 - Private treaty sales to dealers or feeders.
 - Backgrounding the calves yourself.
 - Retaining ownership through the feedlot.

CONSIDERATIONS FOR ALL CATTLE

- Treat calves for internal/external parasites.
- Remove fly-control ear tags.

FALL-CALVING HERD

Calving season begins

- Cows should be moved to a clean, accessible pasture for calving.
- Identify calf with an ear tag, tattoo or both while it is young and easy to handle. Record dam ID and birth date. Commercial male calves should also be castrated and implanted according to product recommendations. Castration and dehorning are less stressful when performed on young animals. Registered calves should be weighed during the first 24 hours following birth.
- If applicable, schedule AI technicians. Record the identification number of the first calf born on the appropriate calendar date to serve as a record for the PVP program.

FORAGES

- Soil test your hay fields and pastures. Apply phosphate, potash and lime according to soil test recommendation to the species and management.
- Do not harvest or graze alfalfa fields to replenish root reserves.
- Graze crop residues (beware of grazing restrictions on certain crop herbicides).
- Beware of prussic acid (cyanide) poisoning from grazing summer annual grasses following frost.
- Start inventory of hay supplies and needs and test hay quality.
- Consider broadleaf weed control in grass pastures.



OCTOBER 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday		
UTBEEF.COM		1 Due Jul 11	2 Due Jul 12	3 Due Jul 13 <i>Ag in the Foothills Field Day in Walland, TN</i>	4 Due Jul 14	5 Due Jul 16		
		6 Due Jul 17	7 Due Jul 18 <i>Tennessee Beef Heifer Development Program Spring-born Check in</i>	8 Due Jul 19			9 Due Jul 20	10 Due Jul 21 <i>Northeast TN Beef Expo Field Day in Greeneville, TN</i>
		13 Due Jul 24	14 Due Jul 25	15 Due Jul 26 <i>Sunbelt Ag. Expo in Moultrie, GA</i>			16 Due Jul 27	17 Due Jul 28
20 Due Jul 31	21 Due Aug 01	22 Due Aug 02	23 Due Aug 03	24 Due Aug 04	25 Due Aug 05	26 Due Aug 06		
27 Due Aug 07	28 Due Aug 08	29 Due Aug 09	30 Due Aug 10	31 Due Aug 11				

NOVEMBER

SPRING-CALVING HERD

Plan your winter feeding program.

- Obtain cow and calf weights and see your UT Extension County Agent for information on record-keeping programs. Cull cows based on performance and pregnancy status and make initial heifer selections, keeping more than you intend to retain for the next breeding season.
- Evaluate body condition (BCS) of cows after weaning their calves. Sort thin cows (BCS<5) away from the main cow herd so they can receive extra feed, if needed.
- Dry cows can utilize crop residues and poor-quality hay, but do not let them lose weight. Save higher-quality feeds until calving time.
- Replacement heifers should gain at an adequate rate to reach their “target” breeding weight (65 percent of mature weight) by March 1.
- Increase feed to cows 45-60 days prior to calving.

CONSIDERATIONS FOR ALL CATTLE

- Record all cow deaths, purchases, sales and movements among pastures.
- This is a good time to freeze-brand replacement heifers for permanent identification.
- Evaluate performance of calves and consider changes in your breeding program.

FALL-CALVING HERD

Fall-calving continues

- Check calving pastures frequently.
- Identify calf with ear tag, tattoo or both while it is young and easy to handle. Record dam ID and birth date. Commercial male calves should also be castrated and implanted according to product recommendations. Castrating and dehorning are less stressful when performed on young animals. Registered calves should be weighed during the first 24 hours following birth.
- Move cows with young calves to the best stockpiled fescue pasture.
- Line up AI sires and/or purchase new bulls at least 30 days prior to breeding season. Choose a breed and use EPDs and visual observation to select the bull that best fits your program and budget.
- Have a veterinarian perform breeding soundness evaluations on bulls.
- Evaluate yearling replacement heifers for reproductive tract score and weight. Heifers should reach their target weight of 65 percent of expected mature weight by breeding season.

FORAGES

- Soil test your hay fields and pastures. Apply phosphate, potash and lime according to soil test recommendation to the species and management.
- Begin using stockpiled tall fescue.
- After November 1 or a killing frost, fall alfalfa can be grazed or mowed.
- Use crop residues as needed or available.
- Graze alfalfa after November 1 or freeze down (24 degrees for a few hours).
- Continue inventory of hay supplies and needs.
- Continue testing hay for nutrient content.



NOVEMBER 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
UTBEEF.COM					1 Due Aug 12	2 Due Aug 14
3 Due Aug 15	4 Due Aug 16	5 Due Aug 17	6 Due Aug 18	7 Due Aug 19	8 Due Aug 20	9 Due Aug 21
10 Due Aug 22	11 Due Aug 23	12 Due Aug 24	13 Due Aug 25	14 Due Aug 26	15 Due Aug 27	16 Due Aug 28
17 Due Aug 29	18 Due Aug 30	19 Due Aug 31	20 Due Sep 01	21 Due Sep 02	22 Due Sep 03	23 Due Sep 04
24 Due Sep 05	25 Due Sep 06	26 Due Sep 07	27 Due Sep 08	28 Due Sep 09	29 Due Sep 10	30 Due Sep 11

DECEMBER

SPRING-CALVING HERD

Begin winter feeding

- Divide the herd into groups for winter feeding, which may include:
 - Weaned calves.
 - First and second-calf heifers and thin cows.
 - The remainder of the dry cows that are in good body condition.
 - Herd sires.
- Feed the lowest quality forage to mature dry cows during early winter.
- Be sure that weaned heifer calves are on “target” and being fed so that they weigh 65 percent of mature weight by 14 to 15 months of age.

Prepare for calving

- Prepare a calving area and equipment:
 - Facilities to warm chilled calves (warming box, truck cab, heat lamp, etc.).
 - Puller and chains.
 - Ear tags and applicator.
 - Frozen colostrum or commercial colostrum supplement.
 - Oral calf feeder.
 - Iodine for calf’s navel.
 - Record book.
 - Scales (optional).
 - Arrange for enough labor to assist during the calving period.
- Mature dry cow’s needs are minimal if they are in the desired body condition (BCS of 5).
- Keep replacement heifer calves gaining enough to reach their “target” weight (65 percent mature weight) by the start of the breeding season.

CONSIDERATIONS FOR ALL CATTLE

- Record all cow deaths, purchases, sales and movements among pastures.
- Review this year’s calf crop and start plans for next year’s breeding program.
- Plan to attend Advanced Master Beef Producer and other educational meetings to update your knowledge of beef production.
- Develop criteria for bulls to be purchased and start attending bull sales.

FALL-CALVING HERD

Breeding season begins

- Pre-breeding working. Consult your veterinarian about vaccines and health products your herd needs. These may include:
 - Deworming cows.
 - Vaccinating cows for Lepto (5-way), IBR, BVD and vibrio.
 - Vaccinating calves for clostridial diseases (blackleg) and IBR-PI₃-BVD-BRSV.
- Dehorn, castrate and implant and ID calves if not already completed.
- Cows must be fed when the pasture runs out. Cows with calves need 25 or 30 pounds of good quality hay or its equivalent. Supplement with grain, if needed.
- Start breeding cows by December 22 for fall-calving to begin in October.
- Observe performance of bulls during breeding season. If the number of cows returning to estrus is large, try to determine the cause and consider changing bulls.
- At beginning of breeding season, record inventory of all cows in each breeding pasture. Record the identification number of the last calf born on the appropriate calendar date to serve as a record for the PVP Program.

FORAGES

- Continue using stockpiled tall fescue and crop residues as available.
- Continue testing hay for nutrient content.
- Begin hay feeding, minimizing waste.



DECEMBER 2019

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 Due Sep 12	2 Due Sep 13	3 Due Sep 14	4 Due Sep 15	5 Due Sep 16	6 Due Sep 17	7 Due Sep 18
8 Due Sep 19	9 Due Sep 20	10 Due Sep 21	11 Due Sep 22	12 Due Sep 23	13 Due Sep 24	14 Due Sep 25
15 Due Sep 26	16 Due Sep 27	17 Due Sep 28	18 Due Sep 29	19 Due Sep 30	20 Due Oct 01	21 Due Oct 02
22 Due Oct 03	23 Due Oct 04	24 Due Oct 05	25 Due Oct 06	26 Due Oct 07	27 Due Oct 08	28 Due Oct 09
29 Due Oct 10	30 Due Oct 11	31 Due Oct 12	UTBEEF.COM			

Gestation Table--Based on a 283-Day Gestation Period

Breeding Date	Due Date	Breeding Date	Due Date	Breeding Date	Due Date	Breeding Date	Due Date	Breeding Date	Due Date	Breeding Date	Due Date
January 1	October 11	March 1	December 9	May 1	February 8	July 1	April 10	September 1	June 11	November 1	August 11
January 2	October 12	March 2	December 10	May 2	February 9	July 2	April 11	September 2	June 12	November 2	August 12
January 3	October 13	March 3	December 11	May 3	February 10	July 3	April 12	September 3	June 13	November 3	August 13
January 4	October 14	March 4	December 12	May 4	February 11	July 4	April 13	September 4	June 14	November 4	August 14
January 5	October 15	March 5	December 13	May 5	February 12	July 5	April 14	September 5	June 15	November 5	August 15
January 6	October 16	March 6	December 14	May 6	February 13	July 6	April 15	September 6	June 16	November 6	August 16
January 7	October 17	March 7	December 15	May 7	February 14	July 7	April 16	September 7	June 17	November 7	August 17
January 8	October 18	March 8	December 16	May 8	February 15	July 8	April 17	September 8	June 18	November 8	August 18
January 9	October 19	March 9	December 17	May 9	February 16	July 9	April 18	September 9	June 19	November 9	August 19
January 10	October 20	March 10	December 18	May 10	February 17	July 10	April 19	September 10	June 20	November 10	August 20
January 11	October 21	March 11	December 19	May 11	February 18	July 11	April 20	September 11	June 21	November 11	August 21
January 12	October 22	March 12	December 20	May 12	February 19	July 12	April 21	September 12	June 22	November 12	August 22
January 13	October 23	March 13	December 21	May 13	February 20	July 13	April 22	September 13	June 23	November 13	August 23
January 14	October 24	March 14	December 22	May 14	February 21	July 14	April 23	September 14	June 24	November 14	August 24
January 15	October 25	March 15	December 23	May 15	February 22	July 15	April 24	September 15	June 25	November 15	August 25
January 16	October 26	March 16	December 24	May 16	February 23	July 16	April 25	September 16	June 26	November 16	August 26
January 17	October 27	March 17	December 25	May 17	February 24	July 17	April 26	September 17	June 27	November 17	August 27
January 18	October 28	March 18	December 26	May 18	February 25	July 18	April 27	September 18	June 28	November 18	August 28
January 19	October 29	March 19	December 27	May 19	February 26	July 19	April 28	September 19	June 29	November 19	August 29
January 20	October 30	March 20	December 28	May 20	February 27	July 20	April 29	September 20	June 30	November 20	August 30
January 21	October 31	March 21	December 29	May 21	February 28	July 21	April 30	September 21	July 1	November 21	August 31
January 22	November 1	March 22	December 30	May 22	March 1	July 22	May 1	September 22	July 2	November 22	September 1
January 23	November 2	March 23	December 31	May 23	March 2	July 23	May 2	September 23	July 3	November 23	September 2
January 24	November 3	March 24	January 1	May 24	March 3	July 24	May 3	September 24	July 4	November 24	September 3
January 25	November 4	March 25	January 2	May 25	March 4	July 25	May 4	September 25	July 5	November 25	September 4
January 26	November 5	March 26	January 3	May 26	March 5	July 26	May 5	September 26	July 6	November 26	September 5
January 27	November 6	March 27	January 4	May 27	March 6	July 27	May 6	September 27	July 7	November 27	September 6
January 28	November 7	March 28	January 5	May 28	March 7	July 28	May 7	September 28	July 8	November 28	September 7
January 29	November 8	March 29	January 6	May 29	March 8	July 29	May 8	September 29	July 9	November 29	September 8
January 30	November 9	March 30	January 7	May 30	March 9	July 30	May 9	September 30	July 10	November 30	September 9
January 31	November 10	March 31	January 8	May 31	March 10	July 31	May 10	October 1	July 11	December 1	September 10
February 1	November 11	April 1	January 9	June 1	March 11	August 1	May 11	October 2	July 12	December 2	September 11
February 2	November 12	April 2	January 10	June 2	March 12	August 2	May 12	October 3	July 13	December 3	September 12
February 3	November 13	April 3	January 11	June 3	March 13	August 3	May 13	October 4	July 14	December 4	September 13
February 4	November 14	April 4	January 12	June 4	March 14	August 4	May 14	October 5	July 15	December 5	September 14
February 5	November 15	April 5	January 13	June 5	March 15	August 5	May 15	October 6	July 16	December 6	September 15
February 6	November 16	April 6	January 14	June 6	March 16	August 6	May 16	October 7	July 17	December 7	September 16
February 7	November 17	April 7	January 15	June 7	March 17	August 7	May 17	October 8	July 18	December 8	September 17
February 8	November 18	April 8	January 16	June 8	March 18	August 8	May 18	October 9	July 19	December 9	September 18
February 9	November 19	April 9	January 17	June 9	March 19	August 9	May 19	October 10	July 20	December 10	September 19
February 10	November 20	April 10	January 18	June 10	March 20	August 10	May 20	October 11	July 21	December 11	September 20
February 11	November 21	April 11	January 19	June 11	March 21	August 11	May 21	October 12	July 22	December 12	September 21
February 12	November 22	April 12	January 20	June 12	March 22	August 12	May 22	October 13	July 23	December 13	September 22
February 13	November 23	April 13	January 21	June 13	March 23	August 13	May 23	October 14	July 24	December 14	September 23
February 14	November 24	April 14	January 22	June 14	March 24	August 14	May 24	October 15	July 25	December 15	September 24
February 15	November 25	April 15	January 23	June 15	March 25	August 15	May 25	October 16	July 26	December 16	September 25
February 16	November 26	April 16	January 24	June 16	March 26	August 16	May 26	October 17	July 27	December 17	September 26
February 17	November 27	April 17	January 25	June 17	March 27	August 17	May 27	October 18	July 28	December 18	September 27
February 18	November 28	April 18	January 26	June 18	March 28	August 18	May 28	October 19	July 29	December 19	September 28
February 19	November 29	April 19	January 27	June 19	March 29	August 19	May 29	October 20	July 30	December 20	September 29
February 20	November 30	April 20	January 28	June 20	March 30	August 20	May 30	October 21	July 31	December 21	September 30
February 21	December 1	April 21	January 29	June 21	March 31	August 21	May 31	October 22	August 1	December 22	October 1
February 22	December 2	April 22	January 30	June 22	April 1	August 22	June 1	October 23	August 2	December 23	October 2
February 23	December 3	April 23	January 31	June 23	April 2	August 23	June 2	October 24	August 3	December 24	October 3
February 24	December 4	April 24	February 1	June 24	April 3	August 24	June 3	October 25	August 4	December 25	October 4
February 25	December 5	April 25	February 2	June 25	April 4	August 25	June 4	October 26	August 5	December 26	October 5
February 26	December 6	April 26	February 3	June 26	April 5	August 26	June 5	October 27	August 6	December 27	October 6
February 27	December 7	April 27	February 4	June 27	April 6	August 27	June 6	October 28	August 7	December 28	October 7
February 28	December 8	April 28	February 5	June 28	April 7	August 28	June 7	October 29	August 8	December 29	October 8
		April 29	February 6	June 29	April 8	August 29	June 8	October 30	August 9	December 30	October 9
		April 30	February 7	June 30	April 9	August 30	June 9	October 31	August 10	December 31	October 10
						August 31	June 10				



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