Texas Agricultural Extension Service
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# A Management Calendar For Spring Calving

This management calendar was developed as a production practice and management guide for Texas cattlemen who practice spring calving. The time of application of the procedure may vary depending upon the location of the herd and operator's management practices. Local adjustments and adaptations in some areas may be necessary due to differences in type of grass and cattle, amount of rainfall, length of grazing season and/or other factors. Therefore, the suggested dates may not always be appropriate and producers are encouraged to use the management procedures and guidelines that fit their operations. Assistance in making these adjustments for local ranches is immediately available to cattlemen from their county Extension agent. In addition, it is not this publication's intention to endorse any brand name products for use in management. Rather, those decisions should be left up to the individual rancher.

*This publication was prepared for* The Cattleman *magazine by Larry Boleman, Texas Agricultural Extension Service beef specialist. Appreciation and recognition is given to the Extension specialists who studied the calendar and made many constructive suggestions:*

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# Texas Agricultural Extension Service
# A Management Calendar for Spring Calving

**JANUARY** | **FEBRUARY** | **MARCH**

HEIFERS CALVE (60 DAYS)

COWS CALVE (60-80 DAYS)

## Calf Management Procedures at Birth

Provide shelters for newborn during extreme cold
First calf heifers should be separated from herd for closer management and observation
Check for dystocia (aid cow if have abnormal position of calf or hard labor for 1 hour without progress)
Apply a 2% or 7% iodine solution to naval immediately after birth
Give calves colostrum if they do not nurse within 6 hours
Identify calves (ear tag and/or tattoo) for record system
Record birth weight
Record sex
Check calves for pneumonia and scours (vaccinate if necessary)
Castrate, dehorn, and implant (do not implant replacement bulls or heifers)
Record treatments given
Separate cows that have calved from rest of the herd

## Cow Herd Management and Health Procedures

Vaccinate open replacement heifers (30-60 days before breeding)
- Leptospirosis (3-way - G.H.P.)
- Campylobacter (vibriosis)

External and internal parasites
- deworm
- pour-on for lice

Select breeding dates if synchronizing estrus - Plan ahead
Herd should be on an increased plane of nutrition, gaining 3/4 lb./day, to ensure adequate conception
- gain needed depends on body condition. If cows score 6, 7, or 8, feed maintenance ration only. If score 3 or 4, then would definitely need 3/4 to 1½ lb./day gain beginning 80-120 days before start of calving
- feed 12-14% phosphorus supplement and salt year-round

## Potential Problems

Grass Tetany (feed ample amounts of magnesium oxide)
Bloat (feed poloxalene or other anti-bloat agent)
Nitrate poisoning

## Prepare Bulls for Breeding

Vaccinations
- Leptospirosis (3 way - G.H.P.)

External and internal parasites
- deworm
- pour on for lice

Determine number of bulls needed:
- yearling bull: 10 to 20 cows
- 2-year old bull: 20 to 30 cows
- mature bull: 30 to 40 cows

Select sires
Perform breeding soundness evaluation
Have sires in good condition/provide exercise
If A.I. have ample semen on hand, replenish supplies, plan breeding program, heat detection system, schedule, etc.

## Selection of sires

Select bulls on basis of:
- quality
- conformation: muscling, skeletal soundness
- weight: birth, weaning, and yearling
- temperament
- dam's record (if plan to keep replacement heifers)
- calf's weaning weight ratio within the herd
- calving interval of dam
- udder and skeletal soundess of dam
- daughter's performance
- scrotal circumference measurement

## Winter Pasture Management

Move cows and calves onto winter pasture after they calve if economically practical
Utilize limit grazing when quantity is low or when dictated by economics
Topdress with nitrogen as needed
If winter pasture absent, supplement with hay/silage and/or concentrates after killing frost or when standing forage quantity is low

## Plan Improved Spring/Summer Forage Program

- test soil
- contract for fertilizer needed
- plan rotational grazing program
- plan hay production needs and program
- consider using pre-emergence herbicides
- consider prescribed burning (Feb.-Mar.)

## Rangeland Management Practices

Use mechanical brush control practices - chaining, root plowing and grubbing
Install prescribed burns
Prepare seedbed for rangeland seeding
Inspect rangeland for weed infestation
Apply pelleted herbicides for brush control

## Rangeland Management Practices

Record date of mesquite bud break
Seed rangeland
Initiate planning for prescribed burns
Apply herbicides for broadleaf weed control
Apply soil active herbicides for individual plant treatment

Table 1. Daily Nutrient Requirements for breeding heifers and lactating cows. (Adapted from 1984 Nutrient Requirements of Beef Cattle)

| Status | Weight | Gain | Dry Matter | Crude Protein | TDN | Ca | Phos. | Vit. A |
|---|---|---|---|---|---|---|---|---|
| | lbs. | lbs./day | | | | | | I.U./day |
| Breeding Heifer | 700 | 1.5 | 17 | 1.49 | 10.6 | .048 | .032 | 20,500 |
| Lactating Cow | 1100 | 0 | 22 | 2.3 | 13.3 | .072 | .054 | 39,000 |

**APRIL** | **MAY** | **JUNE**

HEIFER BREEDING SEASON (60 DAYS)

A.I. or turn bulls in
Use bulls that sire small calves

COW BREEDING SEASON ( 60-80 DAYS)

A.I. or turn bulls in

Calf Management Procedures

- Brand (may be done at weaning)
- Dehorn
- Castrate (if not already completed at birth)
- Implant
- Calves should be at least 8 weeks of age before vaccinating
- Vaccinations (consult local veterinarian)
  - Clostridial bacterin (4 way)
    - Blackleg
    - Malignant edema
    - Sordellii
    - Black disease
  - Leptospirosis (3 way - G.H.P.)
  - IBR (red nose)
  - $PI_3$
- Consider economics of creep feeding particularly if cows or calves are stressed

If A. I.

- Check herd early morning and evening for signs of heat (estrus), spend at least 30-45 minutes at each check
- Heat detection aids:
  - gomer bulls with chin-ball marker
  - hormone treated cows (androgens)
  - K-mar patch
- Check for cows returning to estrus
- If using estrus synchronization products, follow manufacturer's instructions
- Keep accurate records on dates of estrus, insemination, re-insemination, and identification of sire to be used
- Check nitrogen level in semen tank weekly to insure safety of frozen semen
- Keep AI equipment and working area clean

Control Parasites

- Begin control of external parasites May - October
- Control flies with:
  - backrubbers
  - dust bags
  - spray
  - insecticidal salt-mineral mix
  - insecticidal ear tags

Spring/Summer Improved Pasture Management (April-Sept.)

- Fertilize as recommended by soil test
- Utilize rotational grazing
- Harvest excess spring growth for hay/silage
- Control weeds with herbicides
- Harvest hay/silage at proper maturity stage for high quality
- Store hay properly to prevent losses
- Fertilize after each hay cutting as recommended by soil test results
- Watch for decreasing quality and/or quantity of forage in July - August
- Supplement nursing cows as needed

Rangeland Management Practices

- Check standing crop of forage and level of forage greenup to adjust or determine stocking rate in each range pasture and estimate termination of supplementation period
- Use foliar applied herbicides for brush control (May - June)

Table 2. Daily Nutrient Requirements for pregnant heifers and dry pregnant cows. (Adapted from 1984 Nutrient Requirements of Beef Cattle)

| Status | Weight | Gain | Dry Matter | Crude Protein | TDN | Ca | Phos. | Vit. A |
|---|---|---|---|---|---|---|---|---|
| | lbs. | lbs./day | | | | | | I.U./day |
| Pregnant Heifer | 900 | 1.0 | 18 | 1.5 | 9.9 | .048 | .037 | 24,000 |
| Dry Pregnant Cow | 1100 | 0.5 | 20 | 1.5 | 10.4 | .046 | .041 | 26,000 |

## JULY

### Update Beef Production Knowledge

Attend Extension service meetings and cattle field days
Read university publications
Read beef production magazines and newspapers

### Cow Management Procedures

Pregnancy test cows (45 days after bulls are removed) or at weaning
Lice control
Deworm - pregnant cows & bulls
Cull open cows

### Plan Marketing Program for Calves

Marketing alternatives:
- special feeder sales
- weekly auction markets
- private contract sale to cattle feeder
- private contract sale to feeder cattle dealer

Keep current with present and future cattle markets.

## AUGUST

### Bull Management Procedure

Feed bulls to proper flesh (don't get overfat)
- provide feedstuffs that promote growth rather than fattening

Exercise is important
- provide ample sized lots
- run two or more bulls together or with a few pregnant cows

### Calf Management Procedures

Calf boosters (at least 30 days prior to weaning)
- Clostridial bacterin (4 way)
  Blackleg
  Malignant edema
  Sordellii
  Black disease
- Red water
- IBR
- $PI_3$
- Lepto (3 way-GHP)

Implant (steers and non-replacement heifers)
Deworm if necessary
Brucellosis vaccination for all female offspring/or at weaning

### Early Weaning

Early weaning of calves may be considered because of unfavorable pasture conditions or favorable marketing conditions.

### Continue External Parasite Control Through October

Control pink eye
- reduce flies
- clip tall mature grasses
- inject antibiotics and steroids in each eyelid (if no ulcers present)
- glue a patch over animal's infected eye
- preventative vaccine available

Control grubs - July

## SEPTEMBER

### Winter Pasture Management

Plan winter pastures if planning to hold weaned calves as stockers
- soil test
- prepare seed bed or sod
- plant Sept. 15-Oct. 15 - prepared seedbed
  Oct. 1 - Nov. 7 sod seeded
- fertilize according to soil test
- analyze stored hay/silage for feeding value

Sept. 1 - Topdress warm-season pastures with 50 lbs. N to encourage growth and quality until frost.

### Rangeland Management Practices

Check standing crop of forage in each range pasture to determine or adjust stocking rate for dry summer as potentially 70% of yearly production has occurred from May rains
Use basal treatment for brush control (July - August)

Table 3. Daily Nutrient Requirements of Bulls
(Adapted from 1984 Nutrient Requirements of Beef Cattle)

| Weight | Gain | Dry Matter | Crude Protein | TDN | Ca | Phos. | Vit. A |
|---|---|---|---|---|---|---|---|
| lbs. | lbs./day | | | | | | I.U./day |
| 800 | 2.0 | 19 | 1.85 | 11.8 | .066 | .039 | 28,500 |
| 1200 | 1.5 | 26 | 2.00 | 15.6 | .064 | .051 | 46,000 |
| 1600 | 1.0 | 30 | 2.20 | 16.6 | .080 | .057 | 53,000 |
| 2000 | 0.0 | 32 | 2.10 | 15.2 | .082 | .066 | 55,000 |

## OCTOBER | NOVEMBER | DECEMBER

### Wean Calves

Allow calf to nurse as long as quality pastures last or use winter pastures, wean before cows get too thin
Calculate percent calf crop
Calculate 205-day-adjusted weaning weight
Pregnancy test cows if not done previously
Deworm bulls & pregnant cows
Pregnant cows that are thin should be sorted and supplemented to reach better body condition or placed on winter pasture to increase plane of nutrition
Brucellosis vaccination for all female offspring
Condition calf to eat from feed bunk and water trough
Consider holding over weaned calves and particularily late or light calves as stockers to utilize winter pastures

### Cow Management Procedures

Bring herd records up to date
Prepare record system and material for new calf crop
Prepare calving facilities and equipment
Continue to feed extremely thin cows
Maintain flesh on cows in better condition
Vaccinate pregnant cows and replacement heifers
for colostrum and pre-breeding immunity
Clostridia (4-way)
Lepto (3-way)
Campylobacter (Vibriosis)
Redwater
IBR/$PI_3$ (Killed only)
Calf Scours (if necessary)

### Replacement Heifers

Select on basis of:
- dam's record
- conformation
- weaning weight
- temperament
- select 30 to 50 percent more heifers than needed to allow for culling
- select heifers that will reach target weight at breeding
  British breeds: over 600 pounds
  Exotic breeds: over 700 pounds

Vaccinate replacement heifers for Brucellosis between 4-6 months of age (make sure before 12 months of age)
Brand for permanent individual identification purposes
Ear tags should be large and readable
Provide best pasture available - supplement
Feed heifers to weigh 65% of estimated mature body size

### Cull Cows

Open cows
Smooth mouthed cows
Cancer eye cows
Bad uddered cows
Cows weaning light calves
Unthrifty cows
Weaning weight records

### Fall Pasture Management Practices

Sod seed clovers or other legume to increase spring forage quality and reduce nitrogen fertilizer requirements.
- prepare sod
- plant legume with ryegrass Oct. 15-Nov. 15
- fertilize according to soil test

Consider hay ammoniation for low quality hays
Utilize summer standing forage quickly after killing freeze either by harvesting or intensified grazing
Utilize native ranges
Utilize winter pastures by growing animals or 1st calf dry heifers; or limit graze dry cows if economically practical

### Parasite Control

Continue to monitor and control lice and tick infestations
Deworm cows, calves and bulls if necessary

### Rangeland Management Practices

Use foliar applied herbicides for control of certain brush species (Macartney rose, huisache, blackbrush) Sept.-Oct.

Check standing crop for forage in each range pasture to determine or adjust stocking rate and forage available for winter-dormant period (Oct. - Dec.)

# Records of Performance For Beef Cattle Production and Management Systems

Production is becoming more important every day in the cattle business and with increased productivity it is imperative to place emphasis on the different kinds of production. The following information is about performance records, figuring performance data and applying it to beef cattle management which are valuable tools in managing beef herds. These guidelines are intended to help you select superior calves, identify cows with better mothering ability and superior genetics as measured by weaning weight, rank bulls for growth traits and feed efficiency, and measure the efficiency and progress of your beef cattle production unit.

## I. Reproductive Efficiency

**1. Conception Rate**: the percent of breeding age exposed females that conceive (become pregnant) compared to the total number of breeding age exposed females in the herd. May be expressed for one estrus (heat) period following parturition (calving), for a combination of heat periods, or for the entire breeding season.

Example: $\frac{\text{95 cows conceived (pregnant) at the end of breeding season}}{\text{100 cows exposed during breeding season}} \times 100 = 95$ percent conception rate

**2. Calf Crop Percent (born)**: number of calves born as a percent of the number of cows which were exposed during breeding season.

Example: $\frac{\text{93 calves born}}{\text{100 cows exposed}} \times 100 = 93$ percent calf crop born

**3. Calf Crop Percent (weaned)**: the total number of calves weaned as a percentage of the total number of cows exposed during the breeding season.

Example: $\frac{\text{90 calves weaned}}{\text{100 cows exposed}} \times 100 = 90$ percent of calf crop weaned

**4. Calving Interval**: the average length of time in days between successive parturitions (calvings).

Example: Calving dates = 4/1/86 and 4/1/87 then calving interval = 365 days
Calving dates = 1/1/84, 2/1/85, 4/1/86 and 8/1/87 then calving interval = 435 days
May be calculated for each cow and for entire herd as a measure of fertility.

**5. Additional Information** that will assist in reproductive management efficiency:
a. age at first calving
b. birth weights
c. calving difficulty (dystocia) - codes: 1-calved-no assistance, 2-easy pull, 3-hard pull, 4-Caesarean section
d. calf survival
e. temperament (disposition)
f. breeding soundness evaluation

## II. Growth and Gain Measurements

**1. Weaning Weights**: $\frac{\text{actual weight - birth weight}}{\text{age in days between 160 \& 250}} \times 205 + \text{birth weight} = \text{computed 205 day weight}$

Weaning weight should be adjusted for age of dam, sex of calf and management systems. These will allow for accurate comparisons between calves of different backgrounds.

Suggested Age of Dam Adjustments*
(add to the computed 205 day weights)

| | Additive Factors (pounds) | |
|---|---|---|
| Age of Dam | Male | Female |
| 2 years (21-33 months) | 60 | 54 |
| 3 years (34-46 months) | 40 | 36 |
| 4 years (47-59 months) | 20 | 18 |
| 5-10 years | 0 | 0 |
| 11 years and older | 20 | 18 |

*These factors are not appropriate for all breeds.
Consult your breed association for their recommended guidelines.

**2. Weaning Weight Ratio**: Refers to the performance of an individual relative to the average of all animals in the same group.

Example: $\frac{\text{500-pound individual adjusted weaning weight of bull number two}}{\text{400-pound individual adjusted weaning weight of group of all bulls weaned with number two}} \times 100 = 125$ percent weaning weight ratio

To be meaningful it should be calculated within sex basis on herd mates similar in age and from similar environmental influences.

**3. Yearling (365 day) and Long Yearling (452 or 550 day) Weights**: should be computed for each sex and use actual weaning weight as initial test weight.

adjusted 365 day weight = $\frac{\text{actual final test weight - actual weaning weight}}{\text{number of days between weights (on test)}} \times 160 + 205$ day weaning weight adjusted for age of dam

To compute 452 day and 550 day adjusted weights, 247 and 345 should be substituted respectively for 160 in the above formula.
Example: 500 pounds actual weaning weight at 205 days of age
540 pounds adjusted 250 day weight (3 year dam, bull calf)
1000 pounds weight off test at 370 days of age
Adjusted 365 day weight = $\frac{1000\text{-}500}{165\ (370\text{-}205)} \times 160 + 540 = 1020$

**4. Yearling Weight Ratios**: should be computed separately for each sex-management group.

Example: yearling weight ratio = $\frac{\text{1020 pound (adjusted 365 day weight of bull number three)}}{\text{900 pound (adjusted 365 day weight of all bulls tested with number three)}} \times 100 = 113$ percent yearling weight ratio of bull number three



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