# Decision Tree: **Managing Livestock During Drought**

This decision tree provides a framework for making informed decisions during drought conditions to ensure the sustainability and health of livestock and the farm business.

## STEP 01

### Assess Water Availability

**Is there sufficient water for the cattle?**
(supply and quality.)

- YES — **Proceed to Step 2: Assess Feed Resources**
- NO — **Implement water-saving measures and/or source additional water.**
  - **Can additional water be sourced?**
    (By drilling new wells, installing water storage systems, or reducing herd size if necessary).
    - YES — **Proceed to Step 2: Assess Feed Resources**
    - NO — **Consider reducing herd size or relocating cattle.**

## STEP 02

### Assess Feed Resources

**Is there sufficient feed?**
(forage, hay, supplements)

- YES — **Monitor and manage feed usage.**
  (Regularly monitor feed levels and adjust feeding strategies based on production stages/needs of livestock and feed availability).
- NO — **Evaluate options:**
  - **Can additional feed be purchased?**
    (Purchase feed or adjust feeding strategies to maximize resource efficiency).
    - YES — **Proceed to Step 3: Monitor Animal Health**
    - NO — **Implement feeding strategies to conserve resources.**
      (e.g., early weaning, cull older and/or open stock, alternative feed source options, confinement feeding, rotational grazing).
  - **Can stock be temporarily relocated to where feed supplies are available?**
    - YES — **Arrange transport and relocate.**
    - NO — **Evaluate other options**
      (e.g., purchase forage, alternative feed options, reduce herd, early weaning).
  - **Can the herd be reduced?**
    - YES — **Decide on culling strategy (calves, open stock, aged). Arrange market options and transport and use revenues to purchase feed or save for purchasing replacement stock once drought period passes.**
    - NO — **Purchase feed.**

## STEP 03

### Monitor Animal Health

**Are cattle showing signs of good health and minimal stress?**

- YES — **Continue regular health monitoring and management.**
  (Regularly check for signs of dehydration, malnutrition, or illness.)
- NO — **Take immediate actions such as:**
  - **Provide additional nutritional supplements.**
  - **Separate and treat affected cattle.**
  - **Consult with a veterinarian.**

## STEP 04

### Assess Economic Implications

**Is maintaining the current herd size economically viable?**

- YES — **Continue with current management strategies.**
- NO — **Consider options for reducing herd size based on economic analysis.**
  - **Which cattle to sell?**
    - **Identify and sell less productive or older stock.**
    - **Wean early and sell younger stock.**
    - **Consider selling stock early before market conditions worsen.**

## STEP 05

### Long-Term Strategies

**Implement long-term drought management strategies to mitigate the impact of future droughts:**

- **Develop water conservation methods.**
  (e.g., efficient irrigation systems, water storage).
- **Improve forage management.**
  (e.g., drought-resistant forage, rotational grazing).
- **Invest in infrastructureto support feed and water supply, storage , and quality management.**
- **Create a drought contingency plan for future occurrences including access to water, access to feed, and herd reduction options.**

**Evaluate business goals and options:**

**Determine what you want to achieve with your farm business.**

**Common objectives include maximizing profit, improving sustainability, diversifying income sources, managing risk, and maintaining a farming legacy.**

**Criteria: Identify the factors that are important for evaluating the different enterprises.**

- **Financial Metrics: Net profit, return on investment (ROI), cash flow.**
- **Resource Requirements: Land, labour, capital, equipment.**
- **Risk: Market risk, production risk, financial risk.**
- **Weather and Environment Impact: changing climate conditions, resource usage, long-term viability.**
- **Market Demand: Consumer trends, competition, price stability.**

**Identify alternative enterprises:**

**List potential farm business enterprises that you could consider. For example:**

- **Crop farming** (e.g., corn, soybeans, vegetables, fruit).
- **Livestock farming** (e.g., dairy, beef, poultry, small ruminants, pigs, bison).
- **Specialty crops** (e.g., organic produce, herbs, flowers).
- **Agri-tourism** (e.g., farm stays, educational tours).
- **Value-added products** (e.g., cheese-making, cider production).

**Analyze and Compare - Evaluate Options:**

**Compare the different enterprises based on your criteria. Use metrics such as:**

- **Expected Profit:** The weighted average profit considering probabilities.
- **Risk Exposure:** The potential variability in outcomes.
- **Resource Efficiency:** How well each option utilizes available resources.

**Consider Trade-offs: Weigh the benefits and drawbacks of each option. Consider both financial and non-financial factors such as lifestyle preferences or environmental impact**.

**Make a Decision**

**Based on your analysis, choose the enterprises that best align with your objectives and criteria. Document the reasons for your decision and any assumptions made during the analysis.**

**Monitor and Adjust**

**Once you implement the chosen path forward, monitor your performance and make adjustments as needed. The decision should be revisited periodically to reassess the situation and consider new alternatives, changes in the market or changes in circumstances.**

For more information, refer to the BC Ministry of Agriculture and Food Drought in Agriculture Website and Livestock Drought Management Guidebook:
**https://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/water/drought-in-agriculture**

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