



Match Forage Supplies to Livestock Needs Calculator

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Managing Business Stress
Options, Information & Tools for Alberta Producers

Economics & Competitiveness

AgriProfit\$
Technical Bulletin

Weaning and breeding stock retention decisions are made throughout the summer and fall. Producers try to match feed supplies and additional feed purchases with the number of head they plan to feed during the winter.

When severe dry conditions occur, producers' time is best spent developing and assessing strategies to manage feed resources. This quick "calculator" estimates potential forage shortfalls or surpluses associated with various management options. The "Feed to Need Calculator" very simply estimates the number of head that can be wintered on existing forage supplies. Or conversely, how much extra forage is needed to maintain the breeding herd and/or retained calves.

Using the Calculator

The "Feed to Need Calculator" estimates forage shortfalls or surpluses for cattle feeding scenarios. It uses your information to generate the forages required in different feeding scenarios. The calculator does not balance rations.

Using the calculator requires an understanding of:

- Nutritional characteristics of your feed... has the feed been tested?
- Nutritional requirements of the stock you expect to feed ... do your balanced rations match the cattle you expect to feed?
- Reasonably accurate estimates of feed on hand ... good estimates of unit weights (e.g. bale weights) and moisture content are essential.
- Reasonably accurate estimates of body weight of cattle you expect to feed ... the calculator estimates forage needs based on a percentage of body weight. Under-estimating or over-estimating body weight will make your calculations less reliable.
- The share forages will make up of your rations ... the forage component (as a percentage of body weight) will decline as you substitute other feedstuffs in your rations.
- Reasonable estimates of days on feed.

A Few Tips

- Give yourself a buffer, or margin for error. Temperature and moisture conditions may vary, which impacts your forage needs over the winter and the number of days you expect to feed.
- Do a "sensitivity analysis" ... chart the best and worst case scenarios. Recognizing potential up-sides and down-sides will give you management flexibility in the future.
- Be honest, if not harsh, with your estimates!

Home Stretch

Matching your forage supplies to livestock needs by using the "Feed to Need Calculator" should free up your time to aggressively analyze your winter feeding options.

On "Ropin' the Web" to launch the calculator, click "[Feed to Need Calculator](#)" or go to the url:

[http://agapps16.agric.gov.ab.ca/\\$Department/dept_docs.nsf/all/econ12820/\\$FILE/feedv2.exe](http://agapps16.agric.gov.ab.ca/$Department/dept_docs.nsf/all/econ12820/$FILE/feedv2.exe)

When you launch the calculator, you will be prompted to "Run" or "Save" the file. Save the file to your desktop for easy access, or to a location on your computer where you store management tools and information. Step through a few different scenarios until you are comfortable you can meet your feeding needs.

Dale A. Kaliel

Sr. Economist: Production Economics
Economics & Competitiveness Division

Questions:

Please call the Ag-Info Centre at 310-FARM

An Example

An example of a forage supply and herd reduction strategy is used to illustrate what to put into the calculator, and the result you get out. The following bullets describe aspects of the calculator. These are cross-referenced, by number, to the sample screen on the next page.

- Estimate the number of days you expect to be feeding for the winter. Availability of aftermath, stockpiled or swath grazing, will generally define how far into the fall you can go before you start feeding. Pasture and soil moisture conditions plus designated spring grazing acreage will determine the earliest date you can expect to quit feeding. The difference in days can be entered at “(1)”.
- Note the forage stocks you expect to have available for the winter, by type, including the percent moisture and unit weight of each, in area “(2)”.

Enter the livestock you have on hand, and initially expect to carry through the winter, in area “(3)”. Space is available to note number of head and average weight per head.

- Based on the rations you’ve formulated, enter your estimated daily forage dry matter (DM) intake as a per cent of body weight in “(4)”.
- The resulting tons of forage DM required for the feeding season are then shown in area “(5)”, with the surplus (or deficit) shown in area “(6)”.
- If you’re short of forage, enter an alternate feeding scenario (head, by type, and average weight) in area “(7)”. The projected forage surplus (or deficit) for this alternate scenario, appears in area “(8)”.
- Click on the “print” button, “(9)”, to print a hard copy for future reference.

Step through a few different scenarios until you’re comfortable you can meet your feeding needs.

Feed to Need
Matching Your Forage Supplies to Needs

4. Daily DM Intake - % of Body Weight: Daily DM Intake at: 2.50 % of Body Weight

1. Estimated Feeding Season - days: Estimated Feeding Season: 200 days

3. Current Head on Hand

Cattle Type	Head	Avg. Weight	Lbs. DM/Head/day	Tons Total DM Req'd
Bred Heifers	250	1400	35	875.0
Bred Heifers	50	1100	28	140.0
Bulls	10	2200	55	55.0
R. Heifer Calves	65	750	19	123.5
	0	0	0	0.0

5. Forage DM Req'd - Current Scenario: Total Tons of Dry Matter Required -> 1193.5

7. Alternate Feeding Scenario

Cattle Type	Head	Avg. Weight	Lbs. DM/Head/day	Tons Total DM Req'd
Bred Cows	200	1400	35	700.0
Bred Heifers	50	1100	28	140.0
Bulls	5	2200	55	27.5
	0	0	0	0.0
	0	0	0	0.0

6. Forage Surplus (Deficit) - DM tons - Current Situation: Total Tons of Dry Matter Required -> 867.5

2. Detail of Forage Supplies - on hand & anticipated

Forage Type	Number	Unit Weight	Percent Moisture	Tons DM Available
Hay (bales)	200.0	1400.0	12.0%	123.2
Greenfeed (bales)	400.0	1500.0	15.0%	255.0
Barley Silage (tons)	1500.0	2000.0	65.0%	525.0
Barley Straw (bales)	50.0	900.0	15.0%	19.1
	0.0	0.0	0.0%	0.0
	0.0	0.0	0.0%	0.0

9. "Print" Button: Print

6. Forage Surplus (Deficit) - DM tons: Total Tons of Feed (DM) Available -> 922.3

8. Projected Forage Surplus (Deficit) - DM tons - Alternate Scenario

Projected Forage Surplus (Deficit)	DM Tons
Current Head On-Hand ->	-271.2
Alternate Scenario ->	54.8