



# THE Agri-Vator

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## Managing Forage Inventory for Success

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With many uncertainties facing US dairy producers, one certainty is the need to know current forage inventories, and ensuring ample stocks for next year. Ideally, forage inventory assessments should take place every quarter, tracking current forage stocks against usage rates and incoming harvests. Minimally, an assessment should be taken once per year, after all forages are ensiled.

### Forage inventory assessment checklist:

- Total number and type of animals in the herd, plus expected changes over the coming year
- Forage inclusion rates in the different diets, especially for lactating cows
- Current forage stocks:
  - Do you have corn silage inventory for a four month "carry-over" (e.g. 16-month supply)?
  - Any other crops to be harvested?
- "Shrink" estimate or waste during forage ensiling and feed-out
- Off-farm or extra purchases needed (forage or non-forage fiber sources)



### Herd Forage Requirements

Assessing herd productivity and desired ration forage inclusion rates will help predict requirements, and ultimately,

**Table 1: Annual tons of total forage dry matter (DM) needed per lactating dairy cow at two production and ration inclusion levels**

Average milk production (lbs/hd/day)	Typical dry matter intake (lbs/hd/day)	Annual tons of forage DM per cow (forage inclusion in the daily ration, %)*	
		50	60
90	60	5.5	6.6
80	54	4.9	5.9

\* not adjusted for shrink

**Table 2: Annual forage dry matter (DM) requirements for dry cows and replacement heifers**

Annual tons of forage (DM per head)*	
Dry cow	4.1
Growing heifer (1-2 years old)	3.3
Growing heifer (0.5-1 year old)	2.0

\* not adjusted for shrink

help a producer build a forage inventory budget and set-up the growing plan for the next year. Table 1 estimates tons of forage dry matter needed per cow per year, but does not account for shrink during ensiling or feed-out. The annual tons of forage dry matter needed per operation would have to be increased accordingly. Even exceptional managers can see needs increase 10 to 20%!

Lactating dairy cows will consume the majority of ensiled forage stocks, however, dry cows and replacement heifers still need to be considered. These animal segments are primarily fed high forage based diets. Table 2 helps summarize annual forage dry matter requirements for those animals.

### Measuring Forage Inventory

Knowing the volume, packing density and average forage dry matter content for all ensiled forage storage facilities is important. Work with your nutritionist to calculate the required volume and tonnage needed for all storage structures on an operation, or build your own with the easy-to-use university extension spreadsheet (also calculates density values): <https://fyi.extension.wisc.edu/forage/harvest/>.

When cross-checking herd silage requirements and total ensiled tonnage available, consider the following:

- **Compare on a dry matter basis:** Annual forage requirements versus acreage availability.
- **Inventory ratio of feedstuffs:** While haylage can be fed sooner after ensiling, having enough corn silage “carry-over” inventory pays dividends with greater animal performance benefits.
- **Adapt feeding strategies:**
  - o Feed the highest quality forages (digestibility, palatability and hygiene) to transition, early lactation and high-yielding lactating groups.
  - o Feed cool and palatability silage: Use a research proven inoculant that includes *Lactobacillus buchneri* NCIMB 40788 at 400,000 colony-forming units/gram.
  - o Support proper digestion: Include a rumen-specific active dry yeast probiotic, like *S. cerevisiae* CNCM I-1077, into rations can help manage the rumen pH and improve fiber digestion for improved milk and component yield.
- **Manage the silage-making process:** Grow and harvest at proper maturity and ensile at adequate dry matter, chop and process correctly, pack and seal tightly and apply a research proven silage inoculant designed to minimize dry matter losses, while enhancing forage digestibility and hygienic quality.
- **Minimize shrink:** With ensiled forages, shrink can range from 10 to 20%. The higher the shrink, the less edible silage dry-matter there is to feed.

### Forage Inventory Shortfalls

If short on ensiled inventories, decide how much you still require, and make plans for purchases—and make sure you do it early in the year. Nutritionists can examine the best buy options and inclusion rates for your herds’ specific situation.



Depending on the scenario, using baled hay or straw (physically effective-NDF) for lower performing cattle is an option to allow higher quality silages to be fed to more productive herdsmates. Alternately, if buying silage is the best option, make sure a representative laboratory analysis is taken and fair price evaluations are done (built on forage moisture content).

Feeding non-forage NDF feedstuffs could be considered as well. If herd and economic conditions dictate this scenario, it is possible to feed successful rations with forage inclusion rates as low as 40% total dry matter intake.

### Checklist for the Top 5 Priorities for Fall/Winter Dairy Feeding Programs

1. **Develop a plan** for using homegrown forages and determine whether you need to purchase other forages.
2. **Balance rations** for all groups of cattle on the dairy operation using the inventory and forage analyses.
3. **Review feeding practices** with an Agri-Basics, Inc. Nutritionist to utilize your current inventories for lactating cows, heifers, and dry cows.
4. **Work closely with your nutritionist** to develop and modify the feeding and overall management program throughout the feeding season.
5. **Start making plans** for the next cropping season. Now is the time to evaluate whether to make changes to your cropping system or forage purchasing plans for next year.

### Driving Success Forward

Forage inventory planning remains a top priority. It is a multifaceted conversation and requires a team approach, in an effort to make the most from the owned or rented acres and drive operational and herd profitability forward.



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