

Use silage bags

There are many ways to store silage on your farm. Each farmer needs to find out what works for him or her. Most farmers consider bunkers, top unloading tower silos, and bagged silage before making their choice. Tower silos are the most widely used. Bunkers and silage bags have become more common in recent years.



Why use silage bags?

Bagged silage is a relatively new method that is becoming more widely used. Farmers may want to consider this option before deciding how to store silage on their farm. Among the possible advantages are:

- Lower total annual costs.
- Lower initial investment.
- Much of investment is in machinery; not in structures which are hard to sell if plans change.
- Low storage losses due to spoilage.
- Higher quality silage.
- Potential to reduce work hazards.

Bagged Silage: an option for small, average and large herds.

Bagged silage has its disadvantages as well as advantages. However, in some situations it can improve silage management. Farmers need to compare advantages and disadvantages of different storage methods.

How much does bagging cost?

Table 1 below provides a comparison of the capital investment for different storage methods. When estimating how costly different alternatives are, it is very important

Table 1. Initial Capital Investment for Silage Storage (Holmes, 1995, modified)

Storage Capacity ¹⁾	Concrete Stave Silo	Concrete Bunker Silo	Silage Bags
1,097 ton (384 ton DM) ²⁾	\$73,825	\$58,525	\$33,895
2,194 ton (768 ton DM) ²⁾	\$105,985	\$78,945	\$40,715
4,389 ton (1,536 ton DM) ²⁾	\$202,345	\$135,603	\$54,355

1) Estimates assume 65% moisture content.

2) Storage capacities correspond to needs for 55, 110 and 219 cow herds (based on 7.0 ton forage per year per adult cow with replacement).

**WORK
EFFICIENCY**



TIP SHEET

Ideas for more efficient dairy farming.

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to consider all costs; not only the cost of ownership of structures. Table 2 below compares the TOTAL annual costs. These costs include ownership costs (interest and principal on capital invested in structures

and equipment) as well as operational costs such as labor, maintenance, repairs, fuel, plastic, and property tax on taxable structures. The amount of spoilage (storage loss) is assigned a dollar value and included with operational costs.

Table 2 . Total Annual Costs for Silage Storage (Holmes, 1995, modified)

Storage Capacity ¹⁾	Concrete Stave Silo	Concrete Bunker Silo	Silage Bags
1,097 ton (384 ton DM) ²⁾	\$17,502	\$17,290	\$14,703
2,194 ton (768 ton DM) ²⁾	\$27,755	\$28,219	\$24,322
4,389 ton (1,536 ton DM) ²⁾	\$53,702	\$53,027	\$43,562

1) Estimates assume 65% moisture content.

2) Storage capacities correspond to needs for 55,110 and 219 cow herds (based on 7.0 ton forage per year per adult cow with replacement).

Will bagged silage save money?

- A farm with a **55 cow herd** may save up to **\$2,800 per year** by choosing to store all silage in bags rather than in new tower silos.
- A farm with a **220 cow herd** may save up to **\$10,000 per year** by using bags instead of new bunkers.

All financial comparisons depend on what assumptions are made and what numbers are used. Find out what the costs would be in your case.

Are silage bags safer?

Storing silage in bags may help reduce the conventional safety hazards associated with silage work. Because of the low storage height, there is little danger of falls from elevation. Silage gas exposure can occur, but the hazard is greatly reduced because of the natural ventilation outdoors. Thus, more widespread use of bagged silage may help to reduce the overall number of silage-related injuries.

You can get more information on silage storage alternatives by contacting your county extension agent.

This material was developed by the Wisconsin Healthy Farmers, Healthy Profits Project, whose goal is to find and share work efficiency tips that maintain dairy farmers' health and safety and also increase profits. For more information, call (608) 262-7408 or visit our website at <http://bse.wisc.edu/hfhp/>

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