

Use grain bottles for preweaned calves

Would you like to save steps when feeding grain to calves in outdoor hutches? Are you tired of juggling buckets and operating side doors or entering hutches in awkward postures to retrieve, clean or fill grain pails? Are you trying to find a way to successfully wean calves earlier? If so, consider feeding calf starter in grain bottles!

Why grain bottles?

Grain bottles are a commercially available product which hold about 4 lbs of grain each and are made of clear plastic. They mount on the front wire fence or on separate supports and feature a screw-type top. The calf eats starter through a chewing nipple at the bottom of the bottle.



Grain bottles reduce bending over while feeding. If calves are housed in hutches, grain bottles save steps to and from side doors.

Early weaning can save labor and milk replacer but requires early consumption of calf starter to be successful. Present recommendations to achieve early grain consumption

include feeding starter free access from day 4, cleaning out grain pails daily and discarding leftover grain. Only a few studies compare grain bottles to grain pails. Researchers have noted that calves tend to eat starter feed earlier when using bottles. The manufacturer's own feeding trials also indicate earlier and higher consumption of starter feed when using grain bottles. No study, so far, has demonstrated a statistically significant difference in terms of feed consumption or weight gain when using bottles or pails to feed calf starter.

Easier. Since the bottles protect grain from rain and snow, it is possible to do all feeding at the front, so you won't have to use side doors or enter the hutches. Since the container is see-through, it is easy to monitor grain consumption. Also, you won't need to clean out pails and discard the leftovers daily.

Better Hygiene. Feeding calf starter in closed bottles makes it possible to achieve a high standard of cleanliness, without the need to clean out pails and dispose of leftovers daily. The feed is also protected from rain, insects and birds.

Saves labor. Proper use of grain bottles may allow 1.5 weeks earlier weaning, which reduces labor per calf by 54 minutes. Time studies and modeling data suggest modest labor savings (about 6 hrs/year for a 10 calf operation) as a direct result of feeding grain at the front of the hutches. An operation with an average of 10 preweaned calves may raise 74 calves/year (weaning at 7 weeks). For this size of operation, the total labor savings are estimated at $6.0 \text{ hr} + (74 \times 54 \text{ min}) = 6.0 \text{ hr} + 3996 \text{ min} = 6.0 + 66.6 = \text{about } 73 \text{ hr/yr}$. This corresponds to a labor cost savings of about \$730/yr. Other potential labor differences depend on individual farm routines. It does take more time to fill a grain bottle than it does to fill a bucket, which may offset the labor saved by not needing to clean and refill buckets daily. Therefore, the time to clean and refill pails was not included in our estimates.

**WORK
EFFICIENCY**



TIP SHEET

Ideas for more efficient calf care

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Saves feed costs. Starter feed is routinely discarded when cleaning out grain pails and when the feed is soiled with manure. The total amount is estimated at about 13 lbs per weaned calf. Valued at about \$0.16/lb, this is a loss of about \$2.08 per calf. Assuming that proper use of grain bottles makes it feasible to wean calves 1.5 weeks earlier, calves consume about 10 lbs less of costly milk replacer and about 15 lb more of the less expensive calf starter. This corresponds to an estimated savings of \$5.08 per weaned calf when using grain bottles.



The calf eats grain from a chewing nipple. The flexible attachment allows bottle to sway, which prevents bridging.

The estimated feed cost advantage for using grain bottles = \$2.08 + \$5.08 = \$7.16/weaned calf. For a 10-calf operation, this corresponds to a total feed cost savings of 74 x \$7.16 = \$530/yr.

Farmers interested in early starter feed consumption, high cleanliness and feed quality may want to give grain bottles a try.

How to buy and use grain bottles.

Grain bottles need to be used properly to achieve their potential benefits. Our tip sheets promote the principle of feeding grain in a weather protected container at the front of hutches. Presently, only one commercial product is available. The “Braden Start Dry Feed Bottle” can be purchased at local farm supply stores, or ordered directly from the manufacturer: Braden Industries Inc., Sulphur Springs, TX (1-800-272-3361) at a cost of about \$15. (References are provided as a convenience for our reader. They are not an endorsement by the University of Wisconsin.)

Estimated annual cost savings. (For herd with average of 10 preweaned calves at all times)		
	Less walking only	Less walking + Earlier weaning
Labor saving	\$60	\$790
Feed saving	\$154	\$530
Total saving	\$214	\$1,320
Grain bottle cost	\$102	\$102
Net savings/yr	\$112	\$1,218

Conclusions. Grain bottles facilitate efficient working while feeding calves in hutches and may allow earlier weaning. Potential disadvantages include increased time required to refill the bottles compared to refilling grain buckets and the potential for bridging in the bottle if the molasses content of the feed is high. More research is needed to document the advantages and disadvantages of using grain bottles.

This material was developed by the Wisconsin Healthy Farmers, Healthy Profits Project. Our goal is to find and share work efficiency tips that maintain 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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Work Efficiency Tip Sheet: Use grain bottles for preweaned calves

