

Dairy Environmental Systems

Bedding and manure solids survey

Farmers are invited to respond to a survey about dairy cattle housing and bedding practices on farms in New York and neighboring states. The goal of the survey is to understand the management of dairy cattle bedding materials on farms, how widely the use of manure solids and bedded packs are, what bedding conditioners and additives are used, and the benefits and challenges of these various strategies to keep cows clean, comfortable and productive.

This survey is being conducted by Cornell CALS PRO-DAIRY and is partially funded by the New York Farm Viability Institute, a farmer-driven small grants program funding agricultural research and education projects that will create and share knowledge to improve the economic viability of New York's farmers. For questions, contact: Jason Oliver (jpo53@cornell.edu). Completed surveys can be mailed to: Jason Oliver, 425 Riley-Robb Hall, 111 Wing Drive, Ithaca, NY 14853.

The survey can also be completed digitally by scanning the QR code to the right or at the following web address:

cornell.ca1.qualtrics.com/jfe/form/SV_ekYJWI8beNigRy6



Thank you for taking the time to complete the survey!

Herd demographics

Q1. How many animals do you manage on your farm?

High cows	First lactation	Heifers

Barn Type

Q2. What barn types do you house your cattle in? Please check all that apply.

High cows	First lactation	Heifers
<input type="checkbox"/> Tiestall <input type="checkbox"/> Freestall <input type="checkbox"/> Pack	<input type="checkbox"/> Tiestall <input type="checkbox"/> Freestall <input type="checkbox"/> Pack	<input type="checkbox"/> Tiestall <input type="checkbox"/> Freestall <input type="checkbox"/> Pack

If Tie- or Freestall

Q3. What type of stall base do you use? Please check all that apply. If applicable, please indicate what percentage of cows are on what stall base.

High cows	First lactation	Heifers
<input type="checkbox"/> Deep bed _____ <input type="checkbox"/> Solid rubber mat _____ <input type="checkbox"/> Permeable rubber mat (Bedding saver) _____ <input type="checkbox"/> Water mattress _____ <input type="checkbox"/> Other _____	<input type="checkbox"/> Deep bed _____ <input type="checkbox"/> Solid rubber mat _____ <input type="checkbox"/> Permeable rubber mat (Bedding saver) _____ <input type="checkbox"/> Water mattress _____ <input type="checkbox"/> Other _____	<input type="checkbox"/> Deep bed _____ <input type="checkbox"/> Solid rubber mat _____ <input type="checkbox"/> Permeable rubber mat (Bedding saver) _____ <input type="checkbox"/> Water mattress _____ <input type="checkbox"/> Other _____

Q4. What type of bedding do you use in your stalls? Please check all that apply. If applicable, please indicate what percentage of bedding is used for each animal group.

High cows	First lactation	Heifers
<input type="checkbox"/> Sand _____	<input type="checkbox"/> Sand _____	<input type="checkbox"/> Sand _____
<input type="checkbox"/> Sawdust/shavings _____	<input type="checkbox"/> Sawdust/shavings _____	<input type="checkbox"/> Sawdust/shavings _____
<input type="checkbox"/> Paper/fiber _____	<input type="checkbox"/> Paper/fiber _____	<input type="checkbox"/> Paper/fiber _____
<input type="checkbox"/> Straw _____	<input type="checkbox"/> Straw _____	<input type="checkbox"/> Straw _____
<input type="checkbox"/> Manure fibers _____	<input type="checkbox"/> Manure fibers _____	<input type="checkbox"/> Manure fibers _____
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____

Q5. How many times per week on average are stalls groomed?

High cows	First lactation	Heifers

Q6. How many times per week on average is bedding added to stalls?

High cows	First lactation	Heifers

Q7. How much bedding on average is used per animal per week (lbs / animal / week)?

High cows	First lactation	Heifers

If Pack

Q8. What type of pack base do you use? Please check all that apply.

High cows	First lactation	Heifers
<input type="checkbox"/> Gravel	<input type="checkbox"/> Gravel	<input type="checkbox"/> Gravel
<input type="checkbox"/> Concrete	<input type="checkbox"/> Concrete	<input type="checkbox"/> Concrete
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____

Q9. What type of bedding type do you use in your pack barn? Please check all that apply. If applicable, please indicate what percentage of cows are on what bedding.

High cows	First lactation	Heifers
<input type="checkbox"/> Sand _____	<input type="checkbox"/> Sand _____	<input type="checkbox"/> Sand _____
<input type="checkbox"/> Sawdust/shavings _____	<input type="checkbox"/> Sawdust/shavings _____	<input type="checkbox"/> Sawdust/shavings _____
<input type="checkbox"/> Paper/fiber _____	<input type="checkbox"/> Paper/fiber _____	<input type="checkbox"/> Paper/fiber _____
<input type="checkbox"/> Straw _____	<input type="checkbox"/> Straw _____	<input type="checkbox"/> Straw _____
<input type="checkbox"/> Manure fibers _____	<input type="checkbox"/> Manure fibers _____	<input type="checkbox"/> Manure fibers _____
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____

Q10. Is the pack cultivated or managed as a compost?

High cows	First lactation	Heifers
<input type="checkbox"/> Cultivated	<input type="checkbox"/> Cultivated	<input type="checkbox"/> Cultivated
<input type="checkbox"/> Managed as a compost	<input type="checkbox"/> Managed as a compost	<input type="checkbox"/> Managed as a compost
<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____	<input type="checkbox"/> Other _____

Q11. If cultivated, on average how often per week is the pack cultivated?

High cows	First lactation	Heifers

Q12. If cultivated, what type of equipment is used to cultivate the pack? Please check all that apply.

High cows	First lactation	Heifers
<input type="checkbox"/> Tine cultivator <input type="checkbox"/> Rototiller <input type="checkbox"/> Other _____	<input type="checkbox"/> Tine cultivator <input type="checkbox"/> Rototiller <input type="checkbox"/> Other _____	<input type="checkbox"/> Tine cultivator <input type="checkbox"/> Rototiller <input type="checkbox"/> Other _____

Q13. How much bedding on average is used per animal per week (lbs / animal / week)?

High cows	First lactation	Heifers

Bedding treatments

Q14. Do you add amendments, conditioners (e.g. quicklime), or utilize any post separation treatments (e.g. drying) to improve the quality of your bedding materials? Please check all that apply.

High cows	First lactation	Heifers
<input type="checkbox"/> Quicklime <input type="checkbox"/> Drying <input type="checkbox"/> Other _____	<input type="checkbox"/> Quicklime <input type="checkbox"/> Drying <input type="checkbox"/> Other _____	<input type="checkbox"/> Quicklime <input type="checkbox"/> Drying <input type="checkbox"/> Other _____

Separated manure solids

Q15. Do you separate manure solids?

<input type="checkbox"/> Yes <input type="checkbox"/> No

Q16. If manure solids are used for bedding, how quickly are they utilized after separation?

<input type="checkbox"/> < 12 hours <input type="checkbox"/> 12-24 hours <input type="checkbox"/> > 24 hours
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Q17. What type of separation do you utilize? Please check all that apply.

<input type="checkbox"/> Sand lane <input type="checkbox"/> Sand-manure mechanical separation <input type="checkbox"/> Screw-press separator <input type="checkbox"/> Sloped-screen separator <input type="checkbox"/> Centrifuge <input type="checkbox"/> Roller-press separator <input type="checkbox"/> Other _____
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Q18. If you utilize a screw-press for reclaiming bedding, what screen size do you utilize?
Please check all that apply.

Front screen	Back screen
<input type="checkbox"/> < 0.5 mm	<input type="checkbox"/> < 0.5 mm
<input type="checkbox"/> 0.5 mm	<input type="checkbox"/> 0.5 mm
<input type="checkbox"/> 0.75 mm	<input type="checkbox"/> 0.75 mm
<input type="checkbox"/> 1.0 mm	<input type="checkbox"/> 1.0 mm
<input type="checkbox"/> > 1.0 mm	<input type="checkbox"/> > 1.0 mm

Economics

Q19. How much do you estimate you spend each year per cow on bedding (\$/cow/year)?
Please consider all costs, including material costs, transportation costs, O&M of bedding
equipment, labor, etc. and report a single value.

Motivation

Q20. If you wanted to change bedding type, what would matter most to you when deciding
on a new bedding alternative? Please rank the following.

Cost
 Availability
 Cow comfort
 Mastitis risk
 Other _____

Contact

Q21. If you would like to be contacted for a potential follow up or with any results, please
provide your contact information.

Farm Name:
Primary Contact:
Phone Number:
Email: