



PROJECT 2013-2018

DEVELOPMENT OF SUSTAINABLE ALTERNATIVE SOURCES OF BEDDING FOR DAIRY COWS



Principal Investigator:

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Number of students trained (MSc, PhD, Post-Doc):

3

TOTAL BUDGET

\$181,560

INVESTMENT PARTNERS



Agriculture and Agri-Food Canada



OBJECTIVE:

This study explored the potential of switchgrass (*Panicum virgatum*; i.e. a high-yielding, long-term perennial grass growing on marginal land) as a suitable, comfortable, sustainable and economically feasible bedding option for dairy cows.

KEY OUTCOMES:

- The research confirms that switchgrass may be used by dairy producers as an alternative to straw in deep-bedded free stall.
- New knowledge was created about the use of switchgrass in a tie-stall barn with mattresses. Results for this system suggest that switchgrass is a suitable alternative to straw, and may even lead to a lower *Klebsiella* spp. count on teat ends.
- The economic analysis revealed that for the majority of farms, using switchgrass as a bedding source was an economically advantageous choice. On the other hand, the profitability of this change is more related to the crops removed or added to the dairy farms, rather than the high yields of switchgrass.

BENEFITS TO THE DAIRY INDUSTRY

New knowledge for dairy producers on an alternative source of bedding suitable for free-stalls and tie-stalls.

ORGANIC SCIENCE CLUSTER WEBSITE

dal.ca/faculty/agriculture/oacc/en-home/organic-science-cluster/OSCII.html