AGGP-Agroforestry

No. SASK-22

ADOPTION OF SHELTERBELTS ON CANADIAN PRAIRIES

by SUREN KULSHRESHTHA

INTRODUCTION

Shelterbelts were a part of the prairie landscape in the earlier part of the 20th century. These trees were adopted to reduce the impact of wind erosion as well as to provide some protection to the homestead from harsh winters and summers. Over time the importance of these shelterbelts has declined. Main research question is what factors are responsible for producer to maintain shelterbelts and / or to remove them.

OBJECTIVES OF THE STUDY AND BRIEF METHODOLOGY

The objective of this research was to identify the costs, benefits and the barriers to adoption and retention of shelterbelts that influence agricultural producers and landowners' management decisions related to shelterbelts in the Canadian Prairies. In the summer of 2013, a survey of producers and landowners from the province of Saskatchewan (and several from Alberta) was conducted. Using the information collected in the surveys, the costs and benefits (both economic and non-economic), and potential barriers to adoption and retention of shelterbelts that influence producer's management decisions were identified and analyzed.

RESULTS OF THE STUDY

This research identified:

- There is a trend in the prairie farms for the removal of shelterbelts
- Study also found that there are many barriers to adoption and retention for agricultural producers, mostly related to their economic costs.
- In addition, shelterbelts provide many ecological goods and services to landowners and society.
- In addition, it was found that since many of the benefits of shelterbelts are non-economic (and not traded in the market place), they are more difficult for producers and landowners to recognize within their operations.
- Those who remove or do not adopt are more aware of short run economic trade-offs and opportunity costs related to shelterbelts in their operations
- Going forward, shelterbelts have the potential to play a major role in climate change mitigation by sequestering significant amounts of atmospheric carbon dioxide (CO_2) into the soil and as biomass carbon in aboveground and belowground parts of planted shelterbelt trees or shrubs within the agricultural landscape.

Typical shelterbelts on a prairie farm

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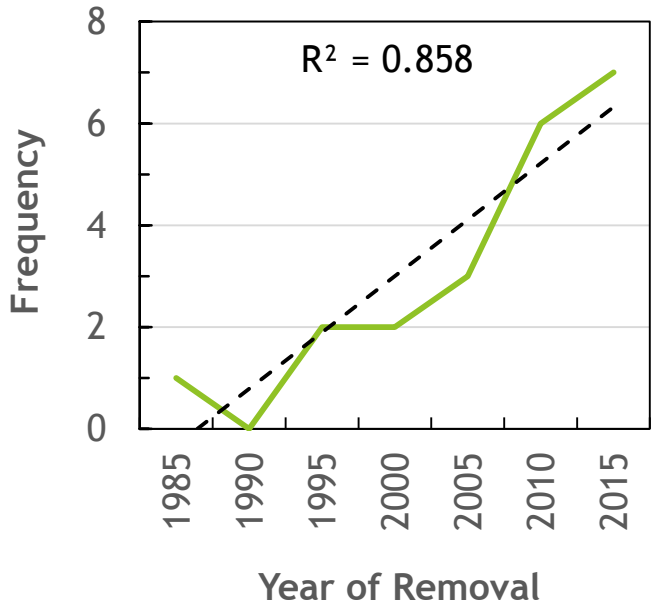
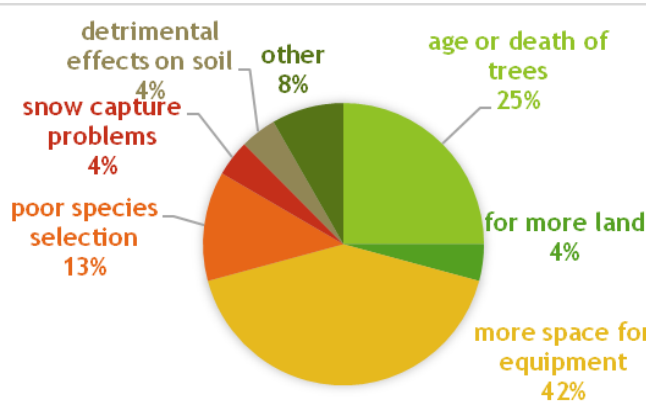


Trend of removal of shelterbelts on prairie farms



Reasons for removal of shelterbelts

Further Reading

Rempel, Janell. 2014. **Costs, benefits, and barriers to the adoption and retention of shelterbelts in prairie agriculture as identified by Saskatchewan producers.** Masters of Environment and Sustainability thesis, University of Saskatchewan

AGGP Fact Sheet(s): **SASK-23** through **SASK-25**

Contact for More Information

For further information contact Professor Ken van Rees at the www.saskagroforestry.ca

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Work on this factsheet was done by Janell Rempel, a graduate student in the School of Environment and Sustainability under the supervision of Professor Suren Kulshreshtha, Department of Agricultural and Resource Economics, University of Saskatchewan, Saskatoon, SK, Canada. This fact sheet was completed in May 2016.