

Invasive Species A Significant Threat to Grassland Biodiversity

by Leanne Thompson for SK PCAP

Invasive plant species are non-native plants introduced outside of their natural habitats. In this new environment, free from their natural 'enemies', they have an advantage that allows them to out-compete native plants for space, moisture and nutrients. On native rangeland, invasive species pose a significant threat to grassland biodiversity and are often extremely difficult to remove once they're established. Examples of invasive species found in Saskatchewan native grassland include weeds such as leafy spurge, common tansy, burdock and downy brome as well as introduced agronomic grass species such as crested wheatgrass and smooth brome grass.

Many of the invasive species we battle today first appeared in Canada's grasslands as early as the mid-19th century, when European settlers began importing seeds – both deliberately for agricultural use and accidentally through contamination by weed seeds. Unfortunately, some of these imported seeds have become invaders of native grassland, due to their aggressive growth habits and lack of natural predators. Other routes of entry for invasive species have come more recently and include grassland recreation, such as camping, hiking, and motorized vehicles, all of which can contribute to the inadvertent spread of invasive seeds.

As cattle producers, we get upset when invasive species show up in our grasslands as we know their spread reduces the carrying capacity and forage quality of pastures and thus impacts our bottom line. There is also the associated cost of controlling these weeds, both in terms of management time and potentially expensive control methods. But did you also know that the spread of invasive species can have a negative impact on biodiversity and on the habitat for many native prairie species?

Invasive species move into native rangeland and can alter the plant community and structure of native prairie, upsetting the fine balance in these ecosystems and reducing their ability to function to their potential. In areas of native rangeland where species at risk may be present, invasive species can be devastating to populations of plants or animals that are already under stress.

A recent, extreme example was taking place in an Environmental Reserve near Medicine Hat where protected, critical habitat for an endangered plant, Tiny Cryptanthe (*Cryptantha minima*), was becoming dominated by the invasive plant baby's breath (*Gypsophila paniculata*). A project in May of 2014 saw cooperators come onto the site where they removed nearly 22,000 baby's breath plants in a massive effort to control this highly invasive weed. The intent is to continue monitoring the site to locate and remove weeds as well as gauge the impact on Tiny Cryptanthe and other native plants.

So what can land managers do to reduce the impact of invasive species?

The most effective, economical, and ecologically sound approach to managing invasive plants is to prevent them from invading in the first place. Land managers often concentrate on fighting well-established infestations, at which point management is expensive and eradication is unlikely. Infestations must be managed to limit the spread of invasive plants, but weed management that controls existing infestations while focusing on prevention and early detection of new invasions can be far more cost-effective.

For more information on invasive species and their management, several resources are available. The Saskatchewan Invasive Species Council (www.saskinvasives.ca)

as well as the Saskatchewan Conservation Data Centre (www.biodiversity.sk.ca) have information on mapping and documenting invasive weeds, as well as information on the Saskatchewan Weed Control Act. The Saskatchewan Association of Rural Municipalities, a PCAP Partner, administers invasive plant management and control programs (www.sarm.ca/programs/administered-programs/invasive-plant). In addition, the Saskatchewan Forage Council (SFC), another PCAP Partner, published an invasive species ID guide and Best Management Practices (BMPs) fact sheets for invasive plant species which are available at www.saskforage.ca. Call the SFC office (306) 969-2666 or the PCAP office (306) 352-0472 to request hard copies. 



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