

A Tool for Invasive Species

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Controlling Invasive Species

Invasive species are non-native species whose introduction causes, or is likely to cause, damage to ecosystem services and reduce habitat for wildlife as well as decrease property value and agricultural productivity.

A few research groups have attempted to estimate the cost of damages caused by invasive species, as well as the costs associated with managing them. A group from Rutgers University, led by Robert Crystal-Ornelas, determined that costs

incurred by invasive species in North America were around \$26 billion USD per year in the 2010s, which was also likely an underestimation of actual costs due to their conservative approach. The agricultural industry was most impacted by invasive species, incurring damages costing \$527.07 billion USD between 1960 and 2017.

Reducing the Impact

The best way to reduce the impact of invasive species is to limit their introduction. Saskatchewan Conservation Data Centre (SCDC) Invasive Species Coordinator Beryl Wait says, "When it comes to invasive species, an ounce of prevention is worth a pound of cure." To prevent the spread of invasive species in agricultural areas, whether in natural areas or cropland, it's important to clean your gear, like boots, tires, machinery or ATVs, before moving from one location to another.

The next best thing is to treat new introductions before they become a major issue. In order to do that, you may need to learn about invasive species so that you can identify them and report where they've occurred to reduce the chances of it becoming a full invasion. Wait mentions, "Documenting where species are found can lead to the application of management actions and strategies to prevent establishment and further spread of an invasive species. The earlier a species is detected and dealt with generally means its overall impact is reduced in terms of negative impacts, control cost and effort."

Mapping Programs and Apps

Mapping programs or apps for plant identification can help facilitate early detection and rapid response. The iMapInvasives platform has been available in Saskatchewan since 2012 and is managed by Saskatchewan Conservation



Red Lily Beetle Original

The Red Lily Beetle is an invasive species, originally from Europe and Asia, that can completely destroy healthy lily plants. Both native lilies and ornamental varieties are susceptible to infestations by this beetle. Saskatchewan Conservation Data Centre is partnering with South Saskatchewan Lily Society to manage information about Red Lily Beetle distribution. Photo © Vernon Hyde

Data Centre. iMapInvasives is an online, interactive invasive species mapping tool that stores information about invasive species detections, treatments and the records of past searches.

Anyone can use iMapInvasives, though it is aimed at land managers and owners, including rural municipalities, community pastures, urban areas, conservation organizations or government agencies. Members of the general public that are concerned about invasive species are encouraged to use it as well.

To report an invasive plant species location, you will need to apply for a free iMapInvasives user account. There is also a map display option where you can view maps of invasive species that have been reported to the site, as well as a number of tools such as forms and templates to help land managers record, track and manage their invasive species occurrences.

Land managers can upload their data and manage it by producing custom maps and

reports, as well as explore existing data to determine if there are any invasive species surrounding their property of which they need to be aware.

"Early detection and response can prevent species from gaining a foothold from which they establish themselves and spread," says Wait.



iNaturalist is another useful option. iNaturalist is a citizen science platform where individuals can record and share their observations. It's great if you are new to plant or invasive species identification because you can upload a photo of any living thing and iNaturalist will help identify the species. Better yet, other users can view your observations and verify the identification or make another suggestion. iNaturalist is a great platform for anyone interested in nature, and it requires no training to use.

More information

Saskatchewan Invasive Species Council (SISC) is a non-profit association of professionals from federal, provincial, municipal governments, industry and non-government organizations. The Council's mandate includes increasing awareness and understanding of invasive species issues, and encouraging action to detect, prevent and manage invasive species.

If a low-tech approach is preferred to learn about invasive species, they also have a lot of information on invasive species in the form of factsheets, image links and more on their website at www.saskinvasives.ca. Saskatchewan Forage Council has also updated the *Saskatchewan Invasive Plant Species Identification Guide*, which can

be found on the Saskatchewan Forage Council website at www.saskforage.ca.

Although identification and prevention aren't the only way to battle the invasive species problem, they should be the first steps to reduce the spread and long-term cost of controlling an infestation.

For a list of Saskatchewan Prairie Conservation Action Plan's recent funders, please visit our website: www.pcap-sk.org/about/supporters

REFERENCES

NeoBiota

- A review of invasive species reporting apps for citizen science and opportunities for innovation neobiota.pensoft.net/article/79597
- Economic costs of biological invasions within North America doi.org/10.3897/neobiota.67.58038

PCAP's **Adopt a Rancher** program is firing up for the year!

Shirley Bartz is our new Education Coordinator and she is looking to connect with ranchers in Saskatchewan. If you want to share some of your experience as a rancher and steward of native grasslands with high school students, please get in touch with Shirley at pcap.education@gmail.com or 306-450-1216.

Participating in Adopt a Rancher means that you meet with Shirley at your ranch, fill out a ranch profile and let Shirley connect you with a science teacher at a nearby high school.

At some point in the fall or spring, a group of 15-year-olds will come out to your ranch to see your pastures, your livestock and to listen to you describe how you run your grazing operation.

For more details on the Adopt a Rancher program, visit pcap-sk.org/for-teachers/adopt-a-rancher

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