The Leafy Spurge Problem: Strategies and Management
By Anne Lazurko, for SK Prairie Conservation Action Plan

Over the past few years, farm and ranch organizations have passed a litany of resolutions asking provincial and federal governments for help to combat the widespread and growing issue of invasive weed species. Infestations by invasive weeds have ecological impacts, as well as economic impacts, such as reduced grazing potential and the cost of treatment.

Ten years ago, a study found the economic costs of leafy spurge infestations alone was over $40 million in Manitoba. In Saskatchewan, Kathy Larson, a research associate at the University of Saskatchewan, is currently leading a two-year study to assess the economic impact of leafy spurge on pastures at Elbow and Forsythe as well as in Douglas Provincial Park.

Using drone-captured images and ‘ground truthing’ grids compiled through GPS mapping, Larson hopes to quantify the extent of the leafy spurge problem, and to then estimate provincial costs in lost grazing capacity, chemical control and indirect costs with fully shared results by early 2021. The goal is to provide Saskatchewan policy makers with information and the incentive to take action.

With thousands of acres infested in this province, ranchers are on the front lines of early detection and response. Despite gaps in funding, many, like the patrons at Elbow Community Pasture, are already engaged in efforts to combat leafy spurge with similar mitigation efforts happening across the province.

In the deep southwest, Melanie Toppi, a plant biologist with South of the Divide Conservation Action Plan (SODCAP), works with ranchers in a symbiotic effort to provide habitat for numerous species at risk by keeping pastures healthy for grazing.

“The problem is that leafy spurge is very good at what it does,” Toppi says. “A deep root system, seeds that jump if touched, the ability to grow in all types of weather and conditions.” It’s the perfect plant – except for the fact that it’s a weed that chokes out natural vegetation. Toppi has spent the past three summers working on control projects, many of which require a number of tools. For example, in the Frenchman Wood River Management Area spurge beetles are released around water where regulations restrict other methods, chemicals are applied around the edge of the property to stop encroachment, and targeted grazing by goats is done in the center areas. Last year 500 goats were part of this project, and sheep were introduced to the mix this year.

“We have a shepherd who makes sure the area is grazed once and again later in the year, so it is overgrazed, weakening the spurge and preventing seed set,” Toppi says. “The nice thing is, the goats eat everything the cattle and horses don’t. Grass is the last thing they eat and so they are not competing with the cattle. It gives the native prairie plants the opportunity to out-compete the spurge.”

Some ranchers have purchased goats themselves and love what they’re seeing, she says, but it could be eight to ten years before assessments can be made of the overall benefits.

The costs of weed management can add up. Saskatchewan Association of Rural Municipalities (SARM) President Ray Orb says the Canadian Agricultural Partnership’s (CAP) Invasive Plant Control Program should help. New for 2019-2020, the $500,000 program administered by SARM offers rebates of 50% on chemical and application costs to control prohibited weeds, and 50% on chemical costs only for noxious weeds, which includes leafy spurge. In this case, the other half of the chemical costs and the entire application costs are left to producers.

Orb points to further efforts through the Plant Health Network (PHN). In its second year and with $715,000 in funding through CAP, the PHN has hired six agrologists as Plant Health Officers to develop, promote and implement best practices around identification, monitoring and controlling invasive species. These Plant Health officers are also a resource to assist councilors, weed inspectors and producers in understanding their responsibilities under the Weed Control Act. But they have no authority to enforce the legislation.

This leaves some producers confused over who is responsible for reporting infestations. Under the Act, weed
inspectors have the authority to monitor and investigate. As it is currently administered by rural municipalities (RMs), the system is largely voluntary reporting or complaints-based with farmers asked to report infestations in their area. This becomes problematic because producers are asked to choose between reporting on their neighbours and preserving the value and productivity of their own land.

"Ultimately, it's the RM's responsibility," Orb admits. "The buck stops with them as far as enforcement goes." Despite SARM encouraging all RMs to hire weed inspectors, not all have complied. Orb suggests producers in those areas can ask for help from neighbouring RMs or appeal to the province. He hopes RMs will engage fully in the process with the help of these new programs.

The problem of invasive weed species will not be easily solved. Research, producer engagement and well-funded programs which help stakeholders in their efforts will go a long way in the fight.

While leafy spurge takes the headlines, other invasive weeds can also wreak havoc. In response, the Saskatchewan Forage Council released a revised and expanded Saskatchewan Invasive Plant Species Identification Guide in 2018 to help producers with early detection. See the Guide: http://www.saskforage.ca/images/pdfs/Publications/Invasive-Plant-Guide.pdf

Targeted grazing by goats is used to control leafy spurge. Photo credit: Melanie Toppi

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