Forage U-Pick: Forage species selection and management decision tool for western Canadian producers

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Project Title:

Forage U-Pick: A forage species selection, weed management, and seeding rate mobile site – a tool for western Canada

Researchers:

Carter, Tamara (Saskatchewan Forage Council) office@saskforage.ca.

Karin Schmid (Alberta Beef, Forage and Grazing Centre; Alberta Beef Producers), Duncan Morrison (Manitoba Forage and Grassland Association), Christine Fulkerth (Alberta Forage Industry Network), Julie MacKenzie, P.Ag.

Background

Ensuring forage species are well-matched to growing conditions improves establishment rates, yield, vigour and quality. This can reduce costs, improve utilization and number of grazing days, and increase profitability. Forage and pasture are essential for beef production. Good production information can produce positive impacts on beef and forage productivity, sustainability, and competitiveness.

Forage U-Pick is a tool designed to provide users with information for forage selection, forage seeding rates, and forage weed management.

Objectives

Provide western Canadian producers with streamlined access to information regarding forage species selection, seeding rates and costs, and weed identification and management, in order to facilitate decision making to improve forage and beef production in western Canada.

Utilize the existing Saskatchewan Dryland Forage Species Selection tool as the foundation for this updated tool ensuring that the new tool is mobile-friendly, easily accessible, and hosted on www.beefresearch.ca

Enhance collaboration between forage specialists in western Canada and promote the tool through widespread communications initiatives.

What They Did

Species adaptability, seeding rate recommendations and weed management information was collected, assessed, classified and re-packaged to create one user-friendly web-based platform, making it easier for producers to access and use the latest information. The original Saskatchewan matrix data (2005-2007) was analyzed against current forage information resources to ensure information was as current and pertinent as possible.

Information for additional western Canadian soil zones/eco-regions was analyzed and developed into matrices of forage species characteristics and forage species responses to specific field characteristics using regional variety trials, summaries of forage adaptation classifications and peer-reviewed resources.

Teams of forage experts from the prairie provinces added their knowledge and expertise to advise how different forages respond in each soil zone/eco-region to characteristics that are seen on farm. These discussions further shaped the matrices.

Weed and weed management information was sourced from existing resources and incorporated into the website as an initial point of reference for weeds in forages.

The forage seeding rate calculator was created based on the best qualities of three existing western Canadian forage seeding rate calculators. Current recommended seeding rates are used and soil zones/eco-regions for the whole of Western Canada were included.

What They Learned

While forage species have general characteristics and adaptabilities that are well documented, there are regional considerations that can positively or negatively contribute to selecting the ideal forage species. Forage U-Pick captures much of these regional considerations and packages them into one easy to use, mobile-friendly, site for producers. Collaboration amongst individuals from 13 different organizations across Western Canada allowed for a wealth of practical experience to be incorporated into Forage U-Pick.

Forage U-Pick has ten field/use characteristic categories, such as soil texture, field salinity level, and the desired forage stand longevity. Each category further provides at least four different choices for the user to consider. This resulted in a vast amount of data detailing the interaction between field characteristics and forage responses, which were then further refined by the expertise of the forage specialists involved. Encouraging users to target their top two or three field/use characteristics will result in the best Forage U-Pick user experience and provide the best starting point for the user.

The forage seeding rate calculator within Forage U-Pick identifies considerations for producers to help to ensure an economically profitable forage stand. The ability to modify the forage seeding rate in a variety of situations and a default minimum PLS (pure live seed) provided by Forage U-Pick stands to greatly improve forage establishment success.

Weed and weed management information was sourced from existing resources such as provincial invasive plants manuals, while the forage specialists helped to identify additional resources in this area as well as the most concerning weed species in each zone.

While every effort has been made to compile accurate and useful information, this tool should be considered a starting point for decision-making. When selecting a forage or forage mix, the Forage U-Pick tool should be used in conjunction with additional feedback from local agrologists, other available technical resources, and the latest forage research.

What it Means

The foundation of beef production is forage, and therefore forages are a key area of management focus for beef producers. Forage seeding and management represent an investment of time, risk, and money for producers. Forage U-Pick is a tool designed to provide users with information for forage selection, forage seeding rates, and weed management for across Western Canada. Forage U-Pick can be considered a starting point for decision-making, as producers work with their local agrologists to select and grow the most appropriate forages for their operation.

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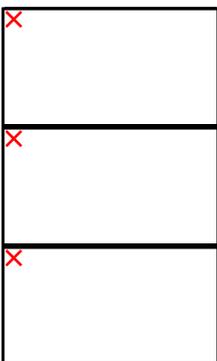
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