In This Issue:

Grain, Grass & Growth

September 2023

www.chinookappliedresearch.ca and www.carasoilhealthlab.ca

End of Summer Staff Windup

CARA staff and summer students enjoyed an end of summer wind up beginning with lunch at the Prairie Elevator Museum and Teahouse in Acadia Valley. Then they tried their luck at the Oyen Crossroads Museum Treasure Hunt. They took home the fasted time of the summer with 53 minutes and 16 seconds! ***From left:*** Braeden Peers, Lizanne Booker, Nicole Bodnaruk, Dan Rude, Karin Roen, Karley Willis, Allie Sauer, Renae Pratt, Danica Woods and Autumn Julseth. Missing from the photo were Navneet Kaur, Yamily Zavala, Luke Caskey, Jerry Pratt and Dianne Westerlund.

September Update

Harvest wrapped up early this year for the CARA Staff, thanks in part to poor cooperation from Mother Nature as drought and grasshoppers took out some trials and reduce yield on the rest. Small samples means the processing will go quickly as well. Hopefully there will be some meaningful data that will be used in the Alberta Seed Guide for informed seeding decisions in the Brown Soil Zone next year. The Alberta Pulse Growers have an app for producers to download and select specific zones in AB to compare yield, maturity, and stand-ability between varieties. Data collected from our Oyen and Consort sites are included on that platform.

Summer Technician duties ended the last week of August as they have all now headed back to school. We had a great crew this year and hope to see them back next summer.

As we finish the field work on crop, soil, and forage trials we are getting ready for an array of events for the late fall and winter of 2024.

- CARA is planning to host a **Crop Club** in the late fall for grain farmers to gather and learn more about marketing, fertility, crop rotations, grasshopper and sawfly control, herbicide resistant weeds, soil health and more.
- We will be continuing the **Grazing Club** meetings in Consort, Pollockville and Hanna with the possibility of adding more locations this winter. Last year we had presentations from industry, research and local perspectives on animal nutrition, rotational grazing, winter feeding options, funding opportunities and water systems. This year we want to expand the topics and audiences we reach.
- Watch for information for our annual **Cattlemen Clinic** which will come in November. This event will nicely compliment the Grazing Club meetings. Tentative topics for our next Cattlemen Clinic include presentations on supporting next year's grazing season, creative winter rations, replacement heifer evaluation and grazing without fences.
- If anyone is interested in a **Pesticide Applicator Course** to be able to utilize the Phostoxin Pellet for gopher control next spring, please contact CARA or Ag Fieldman Don Hogan (403-664-3618 or don.hogan@specialareas.ab.ca)

Dr. Yamily Zavala has been busy this summer creating awareness for Management Alternatives for Soil Health (MASH). MASH is a new initiative from the CARA Soil Health Lab intended to bridge the gap between the current soil health in producer's fields to what they'd like it to be. This is accomplished by establishing a baseline and implementing management alternatives to improve the identified soil constraints. MASH aims to improve biological, chemical, and physical soil characteristics that can lead to more productive and resilient soil. This fall Yamily is looking forward to hosting students from Special Area schools in the CARASHLab to look at soil in a new light, including the recognition of soil micro -organisms under a microscope.

Anyone passing through Oyen will have noticed the construction going on around the CARASHLab. Extra room was required for new equipment and to improve efficiencies of various assessment procedures in the Lab. The exterior was also needing an upgrade. Most lab assessments carried on as usual despite the renovation activity.

Check out the information on producer programs Sustainable Canada Agricultural Partnership (SCAP) and the Resilient Agricultural Landscape Program (RALP) which appears elsewhere in this publication. Contact Karin Roen at CARA for assistance.

To stay up to date on CARA events and resources within the Special Areas check out our webpage (chinookappliedresearch.ca) or on social media including Facebook, Twitter, and Instagram. If you'd like to be included on an email or mailing list for everything CARA related please send a note to cara-3@telus.net. Current upgrades are underway for each of these platforms, so please have patience.

"The SCAP programs include funding for the development of water sources like dugouts, dams, wells, and water pipelines under the Water Program. For projects like digging a dugout, dam, or spring development the producer will need to contact an Alberta Agriculture Water Specialist to review a pre-construction document to ensure the water development meets all legislative requirements. Other funding streams in SCAP include Farm Technology and Farm Security, Efficient Grain Handling, On-Farm Value Added funding, and the Resilient Agricultural Landscape Program (RALP). The funding categories under RALP include pasture management projects like cross-fencing and water systems powered by wind or solar for rotational grazing, adding legumes to existing stands, riparian area management, and targeted grazing for weed control. Other eligible projects under RALP include cropland conversion to native or tame forages, shelterbelt and ecobuffer establishment, perennial forage establishment in saline areas or water runs, intercropping with pulses or cover crops, and wetland restoration and construction as a part of the Wetland Replacement Program. The RALP, Farm Technology, and Farm Security streams require an Environmental Farm Plan for approval. All of these programs have different cost-share and maximum expenses that can be found by going to www.alberta.ca/sustainable-cap-programs.aspx or the CARA website under "Producer Funding". We are available to assist producers with applying or with any questions they may have." Please call the office for assistance 403-664-3777.

We'd like to welcome a few future farmers into our area!

Congratulations to CARA's Crop Agronomist
Braeden Peers and his wife Kim
on the arrival of Nathan back in March.
Nathan's first farm toys will no doubt have some red paint on them.

———————————————-

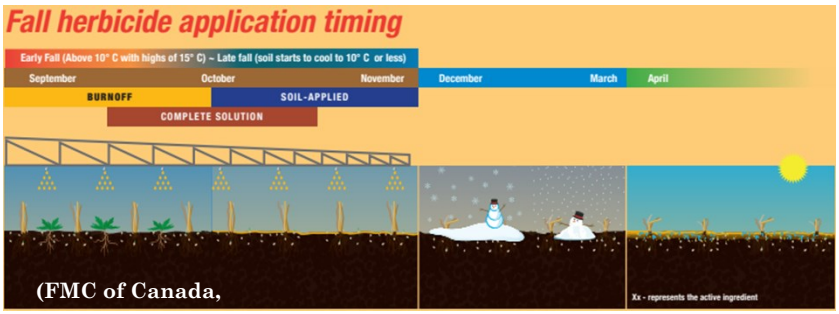
Lacey and Matthew Gould, along with big sisters Grace, Lillian and Jane, welcomed Margaret to their family August 12. Margaret may have a few cows and horses in her farm toy yard. Lacey works part time for CARA as a Conservation Agronomist and Livestock Nutritionist.

———————————————-

Congratulations to Board Member and project cooperator,
Danny Grudecki and his wife Whitney on Bryant's arrival July 10.
Chances are Bryant will soon be playing with green farm equipment.

Fall Herbicide Applications

As the crop year winds down and harvest begins to finish up, many producers start to plan for next year, identifying problem weeds and determining the best way to control them. In general, producers apply herbicide in the fall for two main reasons: to control perennial/winter annual weeds like Canada thistle or Dandelion, or to apply herbicide to the soil that will increase control of spring annuals prior to seeding. When targeting winter annual and perennial weeds, producers would be looking to apply glyphosate with or without a tank mix partner as a fall or post-harvest burn-down. Fall applications of herbicides are the recommended timing for these weeds as the perennial weeds are moving nutrients to the roots as they prepare to overwinter, and the winter annuals are in the seedling stage and easier to control. The timing of glyphosate differs slightly for the perennial and winter annual weeds, however. When targeting perennial weeds in the fall, the weeds must still be actively growing for the herbicide to work, meaning that pre-harvest timing tends to have better results as re-growth after harvest is sometimes minimal (Government of Alberta, 2023). Winter annual weeds germinate in the late summer or early fall and can often be controlled with post-harvest applications from October up until freeze-up but can also be controlled by spring burn-down applications (Government of Alberta, 2023). Prioritizing the type of weeds that are present and timing the herbicide application based on which weeds are more prevalent is important.



(FMC of Canada,

In recent years fall applied soil-active herbicides have been gaining popularity, especially as herbicide resistance in weed populations grows. These herbicides are applied to the soil surface in the fall to control emerging weeds in the spring. Sulfentrazone, Flumioxazin (Gr. 14) and Pyroxasulfone (Gr.15) herbicides have become more popular for their ease of use and efficacy on weed populations resistant to the Group 2, 4 and 9 herbicides. Applications of these herbicides are best accomplished after the soil temperature has dropped below 10°C but before freeze-up. The main idea behind these herbicides is soil contact in the fall and the creation of an active herbicide layer in the spring following the snow melt and/or early spring rains. These herbicides can provide extended crop protection of weeds by remaining active for several weeks in the spring following application. Due to the nature of these chemicals, carry-over can be a risk under the right climactic conditions making reading the label and knowing the recommended re-application interval for each herbicide very important. Flumioxazin and Pyroxysulfone are not persistent in soils with half-lives of 12-17 days and 17-26 days, respectively, with most of the chemical degradation occurring through microbial action (Shaner, 2014). Sulfrentrazone, however, can be quite persistent in soils with a half-life ranging from 121-302 days; because of this long interval it is suggested to only apply Sulfentrazone products every 24 months (Shaner, 2014). When used correctly, these soil-applied herbicides can be very effective in controlling troublesome weed populations in fields where there are few options left.

FMC of Canada. (2023). *Get ahead of the game: A fall herbicide application gives you a jump on spring*.

Government of Alberta. (2023). *Winter annual and perennial weed control*. Retrieved from: https://www.alberta.ca/winter-annual-and-perennial-weed-control.

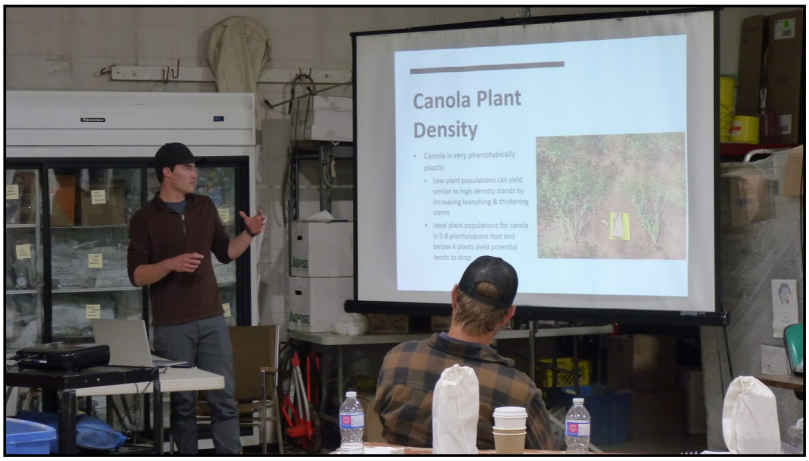
Shaner, D.L. (Ed.). (2014). *Herbicide handbook*. Weed Science Society of America.

Registration is now open for the first Cypress County Ag Connections Conference Presented by MNP, taking place November 22, 2023. The producer-focused event aims to support the growth, diversification, and sustainability of the agriculture industry in the region, through innovation and education. The event will be held at the Medicine Hat Exhibition and Stampede Grounds and will welcome farmers, ranchers, and those in agriculture from across southern Alberta and Saskatchewan. Registration can be done online at www.cypresscountybusiness.ca or at the Cypress County office.

Keynote speaker, farmer and mental health advocate Lesley Kelly will share 'When Stress is more than a Season' and Premier Smith will bring greetings from the province. Other sessions include Smart Irrigation, Innovation in Ag: Drones, The First 48 Hours of a Calves Life, In-Bin Grain Storage & Management, Farm Direct Marketing, Farm Financials, Forage Blends for Southern Alberta, Trends in Ag Technology, 2024 Global Farming Outlook, and more. The full agenda can be found at www.cypresscountybusiness.ca.

July 18 Crop Field Day

25 producers and industry reps spent July 18 with crop specialists and CARA staff discussing several crop management topics. Despite the heat and drought conditions that persisted most of the summer, a horrible wind that day pushed in some cloud bursts, so most presentations took place in the shop at the CARA Center. An over-view of CARA's program was provided by Manager Dianne Westerlund. Dr. Rigas Karamanos talked about optimizing nitrogen management, Jeremy Boychen (AWC) led discussion on seeding rates and dates and Braeden presented information on seeding practices for canola. Edward Biney from Humaterra informed attendees on their products and research to date. Karin Roen demonstrated the water infiltration test and a demo of the wet aggregate stability test was performed by Renae Pratt. Delicious food was enjoyed courtesy of Clay Cup Co.



Everyone ventured out to the Smigelski site in the afternoon for a quick trip around the trials in the rain.

Grazing Stubble Fields

By Barry Yaremcio

With forages in short supply and high priced; anything that can extend the grazing season and use of home-grown feeds reduces winter feeding costs.

Grazing Stubble Field
Photo credit: Barry Yaremcio

Stubble fields as a feed resource can have variable quality. Straw is fairly constant but chaff quality changes. It depends on the amount of grain and weed seeds that were thrown over by the combine, amount of crop re-growth since harvest, and crop type that was harvested. Wheat, rye, and triticale straw typically have the lowest protein at 4% and energy at 40% TDN. Barley straw tends to be better with 4 to 5 % protein and 42 to 45% TDN, and oats can be better quality with 4.5 to 5.5% protein and 44 to 47% TDN. Pea straw is one of the best when it comes to protein, usually 2 to 3% higher than the cereal straws but has the same energy content as barley or oat straw. Canola straw is typically not used for grazing, but is suitable as well. A 2:1 mineral in many cases does not supply enough calcium and magnesium. A 3:1 or 4:1 mineral may be required.

Low quality limits grazing to pregnant dry cows unless supplemental hay, silage, or grain is provided. A pregnant cow in mid pregnancy requires 55% TDN and 7% protein. If protein is not adequate, feed intake can be reduced because it can take longer for the feed to pass through the digestive system. A lack of energy will result in the cow mobilizing fat to meet energy demands and a loss of body condition. A cow that loses weight prior to winter increases maintenance energy requirements and results in more feed required to keep warm.

Supplementing extra energy and protein can be done in a number of different ways. When comparing options, three things must be considered:

1. Is it cost effective?
2. Does the supplement meet the nutritional requirements of the animals?
3. Is it convenient to use?

There are many different products available to use as supplements. Some are free choice and others can be limit fed once every 3 days. Use what works for your operation. For more information on grazing stubble fields as an option for your cows, contact Barry at 403-741-6022 or bjyaremcio@gmail.com

CHINOOK APPLIED RESEARCH ASSOCIATION
Box 690, Oyen, Alberta T0J 2J0 Phone: 403-664-3777
Email: cara-dw@telus.net Web: chinookappliedresearch.ca @CARAresearch Like us on Facebook!

RDAR
Results Driven Agriculture Research

Publication and distribution of this newsletter is supported by Results Driven Agricultural Research and Alberta's Commodity Commissions