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Grain, Grass & Growth

July 2024

8 "Must - Haves" in Your Crop Scouting Kit

I can't stress enough the importance of having your own two feet in the field to see what the heck is going on in your crops. Too often there is far more that we can bring to the field to help us identify exactly what is occurring, but the lack of a few simple tools can leave you with only partial answers.

Here are some suggestions that will help anyone become a better crop scout:

Trowel/Shovel – There are two halves to a plant, and only one half is above ground. Digging up plants and checking roots can tell you a lot about what is going on in a crop.

Soil Thermometer – Knowing the soil temperature at specific depths is important for determining seeding date, but don't take this out of your kit after May! Consider checking soil temperatures in June/July as well, soil temperatures have a lot of influence on what is happening with a plant.

Digging Utensil – May sound similar to a shovel or a trowel, but early season when checking for seed placement and seed depth a smaller tool is great for finding seeds.

Guide Books – Having guides from insect, weed, disease identification booklets to guides from the Canola Council on swath staging and, of course, your provincial Crop Protection Guide are excellent tools to let you know what you are dealing with right in the field.

Smartphone/Tablet – This tool has become more and more powerful over the past couple of years. From the ability to take pictures, have a calculator, Google issues, take down notes, utilize apps or post to Twitter, the smartphone or tablet is a must-have. On my old list of things to keep in a kit calculator, notepad and camera have all been axed since smart phones have gone more mainstream.

Plant Stand Density Tool – I personally use a welded foot-square, but have seen other crop scouts that use hula hoops, to folding plastic squares, ¼ metre square wood blocks and more. Any of these work as long as you are aware of the plant number that you're aiming for. These tools can help identify if your seeding rate was accurate or if there was an issue with emergence or even if a re-seed is necessary. Don't just use for one count, see how stand counts progress one week after seeding, three weeks, six weeks and more.

Knife/Clippers – An Exacto knife or pocket knife are key for cutting open plant stems or roots to check for problem issues. Don't forget the clippers to check for blackleg later in the season by cutting stems off at the base of the soil.

Insect Tools – A sweep net is a must in any scout kit to check for insect pressure in any crop. Next you may find an insect that you cannot identify even with the help of your handy guides so having some sturdy containers such as a small plastic containers (cups from the hospital or old medication tubes) can keep them from being crushed. A plastic bag just ends with them being crushed, especially if sending them away to be identified.

There are many things that I haven't included such as flags, magnifying glass, gloves and more! But this should be a good start for many and I encourage everyone to try and find new things this coming season that they feel will be of benefit to them in their scouting kit

Taken from Grain Grass & Growth July 2018
by Olivia Sederberg

Imagine having a 'birds-eye-view' on your operation

By Morgan Zacharias-Hetes,
Special Area 2 Assistant Agricultural Fieldman

Q: How drones can be of value to Special Areas producers & current funding opportunities
The agriculture sector has advanced in so many ways in such as short amount of time, with the introduction of GPS, Steady Steering, Variable Rate Technologies, and more recent, RPAS. RPAS (Remote Piloted Aircraft Systems), otherwise known as drones has, on its own, come a long way in a short amount of time. With the use on drones on farms, you could make it as simple or as advanced as you wanted. There are various cameras offered with drones from the more advanced such as thermal, multispectral, Lidar, and hyperspectral cameras to those that simply take a snapshot or video of the intended area.

To answer the question "How would the addition of a drone be beneficial to my operation?" is as simple as also asking the question, 'How efficient could I be in my operation?" As mentioned before, there are numerous cameras offered in different ranges of drones as well as various programs attached to the software. Some examples of on-farm uses of drones would be to monitor cattle movements, crop scouting, monitor pest activities, pre-season planning, assessing spray drifts and field mapping, just to name a few. If any of these examples still don't catch your eye, just know you'll have a lot of fun flying, like our SA2 Fieldman and SA2 Assistant Fieldman, Jesse and Morgan

Some on-farm uses and examples of each:

Field Mapping:
Mapping your field to get a more accurate view and measurements for your seeds and any inputs. Document flooding/ drainage, check equipment malfunctions, aid in mechanical calibrations. Assess spray drift/ crop scouting/ monitor pest issues/ assessing damaged crop areas
By accessing a multispectral camera on your drone, you can use NDVI functions and assess if you have any spray drift malfunctions, mechanical malfunctions, or even the number of weeds in a given area, just to name a few.

Pre-season scouting/ planning:

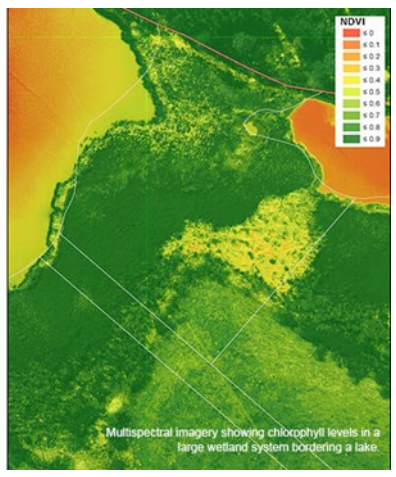
With new technologies and advances in the agricultural sciences, there has been new discoveries when scouting for weeds. One of the new and exciting discoveries is being able to pinpoint the exact NDVI reading for a specific weed. For example: your NDVI function on your multispectral drone being able to pick out each individual plant and recognize it as a specific weed or crop.

Irrigation management:
For those lucky enough in Special Areas to have irrigation, having drones in your irrigation operation could be beneficial in managing irrigation patterns, aid in your VRI, and help manage any flooded areas.

Cattle operation uses:
Top features within a cattle operation: being able to have a 'birds-eye-view' on your herd, counting checks, 'search-and-rescue' operations for your cattle, or assist in trampling claims, just to name a few.

Scenario : Imagine sitting on your lawn chair and streaming real time footage of your cattle from above, seeing where they are, or aren't, or

shouldn't be. With thermal detection on some drones, if you have any cattle who aren't visible and suspected to be in thick brush or trees, you can use this feature to see where these cattle are. It is recommended for cooler times of day as the thermal sensors on these cameras will have an easier time reading the thermal activities within your herd.



Additional Information
What is Multispectral Imagery?
It captures image data within a specific wavelength that ranges across the electromagnetic spectrum. These images are then able to be separated with filters to give data such as NDVI, thermal imaging, water depth measurements, true-color images, etc.

What is NDVI?
NDVI is short for Normalized Difference Vegetation Index. It measures near infrared and red light to quantify vegetative health, in short it can show you the differences in plant health in each area. The numerical range is from -1 (no vegetative growth) to 10 (dense, lush vegetative growth). Fun facts: As of recent years, scientists have been able to pinpoint various NDVI readings to specific plant and weed species. This picture is from a multispectral image taken in a wetlands area. As indicated in the legend, you can see that the lower NDVI ratings are shown to be water, or have the least vegetative growth, whereas the brighter green readings indicate an area of denser vegetative growth.

Where we took our training, they also are a retailer for DJI drones. : LandView Drones

Additional Reading Material:
Drone Tech in Agriculture: A Game Changer (thefarminginsider.com)

Calling Grain Producers in the Canadian Prairies!

Are you a grain producer in the Canadian Prairies? If so, you are invited to participate in a research survey that will be collecting data on the adoption of winter wheat and ultra-early seeding of spring wheat in the Canadian Prairies. This survey will take approximately 15 to 30 minutes.

To participate in this study you must be

- 18 years old or older
- A grain producer in the Canadian Prairies

If you meet the above criteria and are interested in completing the survey, please go the link below or use your phone camera on the QR code.

Survey Link Here

https://forms.gle/LkNoQwSBMjehAWez8

QR Code Here

The Adoption of Winter Wheat and Ultra-Early Seeding of Spring Wheat in Canadian Prairies

Pro00130833

Principal Investigator: Jacey Toerper

If you have any questions please only contact Dr. Linda Gorim at gorim@ualberta.ca or at (780) 492-8814 to protect your confidentiality.

UNIVERSITY OF ALBERTA

SUMMER 2024 CROP TOUR DAYS

CHINOOK APPLIED RESEARCH ASSOCIATION
CARA

Join CARA agronomists, industry, and research experts for a tour of the CARA research plots! View and learn more about different projects CARA is involved with, including: Regional Variety Trials, kochia control, durum seeding demo, canola & barley fertility demos, winter cereals, and more!

Monday - July 29: Acadia Valley and Oyen Sites
9am @ NE 12-24-2 W4, 8 miles south of AV, east on TWP RD 24-2 for 2.5 miles

Thursday - August 8: Consort Site
10am @ NW 11, NW 12-35-7 W4, 4 miles west of Consort, south on Range Rd 7-1

FOR MORE DETAILS & TO RSVP PLEASE CALL (403) 664-3777 OR EMAIL CARA-3@TELUS.NET // WWW.CHINOOKAPPLIEDRESEARCH.CA

ALBERTA PULSE GROWERS
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Special Areas Board est. 1938
RDAR Results Driven Agriculture Research

CARA and our Soil Health Lab staff were very pleased to have Dr. Isbelia Reyes with us for the past 6 weeks.

Dr. Reyes has a Doctorate in Microbiology from Laval University in Quebec. She spent several years as a Professor of Microbiology and led several research projects.

Her time at the CARA Soil Health Lab has been spent evaluating, identifying and isolating various micro-organisms from select soil samples.

21st Annual

SOUTHERN ALBERTA GRAZING SCHOOL FOR WOMEN

JULY 24 & 25

SEVEN PERSONS, ALBERTA

Topics include:

- Grazing Principles and Practices
- Soil Health
- Hands On Plant ID
- Range & Riparian Health
- Succession Planning
- Drought Management Strategies
- Water Security
- Funding Opportunities
- Ranching Women Talks
- And MORE!

SOUTHERN ALBERTA GRAZING SCHOOL FOR WOMEN

@grazing schools for women

Cost: $125.00 (includes all meals)

Details & Registration: https://SAGSW2024.eventbrite.ca

Register before July 17, 2024

FOOTHILLS FORAGE AND GRAZING ASSOCIATION · Alberta Government · MD of Willow Creek · COWS & FISH · MULTISAR · Cypress County · Alberta Conservation Association · seawa South East Alberta Watershed Alliance · COUNTY OF WARNER · CHINOOK APPLIED RESEARCH ASSOCIATION CARA · ALBERTA PRAIRIE CONSERVATION FORUM · NCC

PASTURE & POLYCULTURE FIELD WALK

DATE: August 27th 2024
LOCATION: Red Wing Farms, Sibbald (NW 2-29-1 W4)
COST: Free to attend!
Please RSVP - (403) 664-3777 or cara-3@telus.net
Refreshments and snacks will be provided in the field!

2pm - 2:45pm **Managing Saline Areas with Forages**

Co-op Agro Forage Specialist, Ken Wall, will share insight on an AAFC AC Saltlander Green Wheatgrass Trial completed at Chiliak's from 2008-2011 assessing forage quality, quantity, and the impact on reducing foxtail barley.

3pm-3:45pm **Pasture Management with Red Wing Farms**

A pasture walk with Alan and Ramona Chiliak of Red Wing Farms will highlight the grazing management practices they've implemented to improve pasture conditions.

4pm - 4:45pm **Benefits of Polycultures for Cows & Soil**

Producer, Susan Senkiw, has seeded a swath grazing polyculture in partnership with the Regenerative Agricultural Lab after successfully utilizing warm season cover crops in the past. Learn more about the benefit of polycultures for grazing and soil health with expert, Kevin Elmy!

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