



Ag Drone Flight School

October 25-26, 2016

Ag In Motion Grounds
near Langham, Saskatchewan

Seminars on Remote Crop Sensing with UAV's

Tuesday, October 25, 2016

9:00 a.m. **Welcome & Introductions**

9:30 a.m. **Current Realities of Crop Imaging using Drones**

Markus Weber, PAg, LandView Drones

There is a lot of hype and exaggeration about the capabilities of drones, making many people wary about the actual current uses for unmanned aerial vehicles. This presentation will go through the current state of technology, including satellite, manned, and unmanned imagery collection. Explanation of the most common technologies, with focus on the Normalized Difference Vegetation Index (NDVI).

10:00 a.m. **The Future of Crop Imaging**

Speaker(s) to be determined

10:45 a.m. **Drone & Imagery Demonstrations**

LandView & Blackhawk

Live demonstrations of drone flight capabilities, from multicopters to fixed wing aircraft. Imagery of the AgInMotion site will also be reviewed to show possibilities for using vegetative indexes on farms today: to guide crop scouting or figure out the spatial distribution of barriers to crop growth. Lots of time for Q&A on specific products being offered for the 2017 crop year, from simple point-and-shoot systems, to basic investigative NIR systems, to full-blown multispectral imaging.

12:00 noon Field Lunch (pizza) served to all pre-registered attendees

12:30 p.m. **Regulatory Requirements for Commercial Operations**

Introduction to the legislation around UAV operations, the Transport Canada regulations, and the process for acquiring a Special Flight Operations Certificate.

1:00 p.m. **Insurance for Unmanned Systems**

Brad Borle, Hub International

Transport Canada requires that pilots have insurance for commercial operations, whether under an exemption or an SFOC. Information will be provided on UAV-specific insurance options.

UAV Ground School (Blackhawk Aeronautical)

Tuesday, October 25, 2016

- 1:30 p.m. **Introduction to UAV's**
Students will learn about the basic components of all unmanned aerial vehicles and delve into basic maintenance procedures.
- 3:00 p.m. Coffee break
- 3:30 p.m. **Flight Planning**
Students will learn about the general workflows to ensure safe flights, from pre-flight planning to on-site safety procedures.
- 6:00 p.m. **School concludes for the day**
If interested, the instructors and some participants will be meeting for a supper together at the Model-T Inn & Grill in Borden (approx. 10 minutes west on highway, at participant's cost).

UAV Ground School (Day 2, October 26)

Wednesday, October 26, 2016

- 9:00 a.m. **Flight Mission Planning**
Students will learn about the details of planning in mission-control software. Working individually or in small groups, students will prepare for the flights they will be conducting later in the day.
- 10:00 a.m. Coffee break
- 10:15 a.m. **Safe Flight Operations**
Participants will have an opportunity to conduct a safe flight individually or in small groups, under the direct supervision of an experienced operator and instructor. Various scenarios will be canvassed to help participants contingencies for which they will need to prepare when flying their aircraft.
- 12:00 noon Field Lunch (soup & sandwich)**
- 12:30 p.m. Continuation of Safe Flight Operations session
- 1:30 p.m. **Image Processing**
Markus Weber, PAg, LandView Drones
Participants will learn about the general workflows for the creation of orthomosaic maps and digital elevation models from the imagery they have gathered.

LandView Hands-On Orientation

- 2:00 p.m. *For LandView customers only*
- 5:00 p.m. Any participants who have purchased or ordered a system from LandView will receive hands-on orientation on all elements of their specific unmanned aerial system, including:
- package components & aircraft particulars
 - system updates & maintenance
 - flight planning software
 - image processing software
 - battery management
 - system limitations
 - technical support details

Frequently Asked Questions

What do I need to bring?

1. Clothes for being outside for several hours, especially for those taking the Ground School (note that forecast for Wednesday currently includes chance of showers, and the site is already muddy)
2. A notepad
3. A hat or sunglasses (flying a drone means looking at the sky for extended periods)
4. A lawn chair for the outdoor elements (don't worry, we will have some if you don't)
5. Lots of questions for us to answer

What about food?

- Let us know if you have any unique nutritional requirements or allergies!
- We will have coffee, juices and cookies available during breaks
- Lunch on Tuesday: Pizza, to be consumed during a working lunch during product demos
- Lunch on Wednesday: sandwiches & soup

How many people will be there?

We are anticipating that 22 participants will be attending, in addition to instructors and speakers. Of those, around 15 or so will be attending the Ground School.

How do I pay for the Ground School?

Attendance on Tuesday until 1:30 p.m. is completely free, including lunch. No payment required. For those attending the Ground School: we prefer a cheque (*payable to LandView Drones Inc*) or cash, but will also accept payment by credit card. Just bring the payment (\$470 + tax = \$493.50) with you on Tuesday.

What if I can get back to combining on Wednesday?

Come for as long as you are able, but we won't charge you for the registration if you are unable to complete the curriculum.

Any social events planned?

This event will have plenty of time for networking. A few of us will be meeting for supper and refreshments at the Model-T Inn in Borden (6 miles west of Ag In Motion) on Tuesday night. If you still feel like talking about drones some more that evening, drop in and join us! The rooms at the Inn are all spoken for, though, sorry.

Questions?

Call or text Markus
at (780) 266-4641

Location:

From Saskatoon: drive 5 miles west of Langham on Hwy 16, turn south on Range Road 3083, the site is on the east side
From North Battleford: drive 6 miles east of Borden on Hwy 16, turn south on Range Road 3083, the site is on east side

