

JZAERIAL



In-Season Multispectral Drone Aerial Imagery for Precision Agriculture

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JZAERIAL

About JZAERIAL

JZAERIAL provide professional aerial imagery solutions throughout Alberta, Canada, using the latest in drone technology aerial platforms.

Operating primarily in agriculture and real estate markets.



PRODUCTS & SERVICES

Aerial Mapping

- **Digital Orthomosaic (Orthomap) Generation**
- DEM & DTM Generation
- Contour Map Overlays
- 3D Feature Extractions
- Survey-grade Georeferencing
- Volumetric and Area Calculations

Aerial Photography

- High and Low Aerial Obliques
- Aerial Panoramas
- Aerial Maps (vertically shot)



Agricultural Applications

UAVs offer a very cost effective, time-saving way to acquire ***timely, in-season, field-level information about crop performance.***

UAV-acquired aerial imagery of crops helps growers identify the exact location(s) of poor performing areas in their field, and exactly how many acres are affected.



Agricultural Applications

Help identify:

- Insufficient or excessive moisture levels
- Weed growth
- Insect or pest infestations
- Treatment applications
- Field traffic patterns
- Water runoff and irrigation problem areas
- Delineations of uniform zones in the field (for prescription maps)



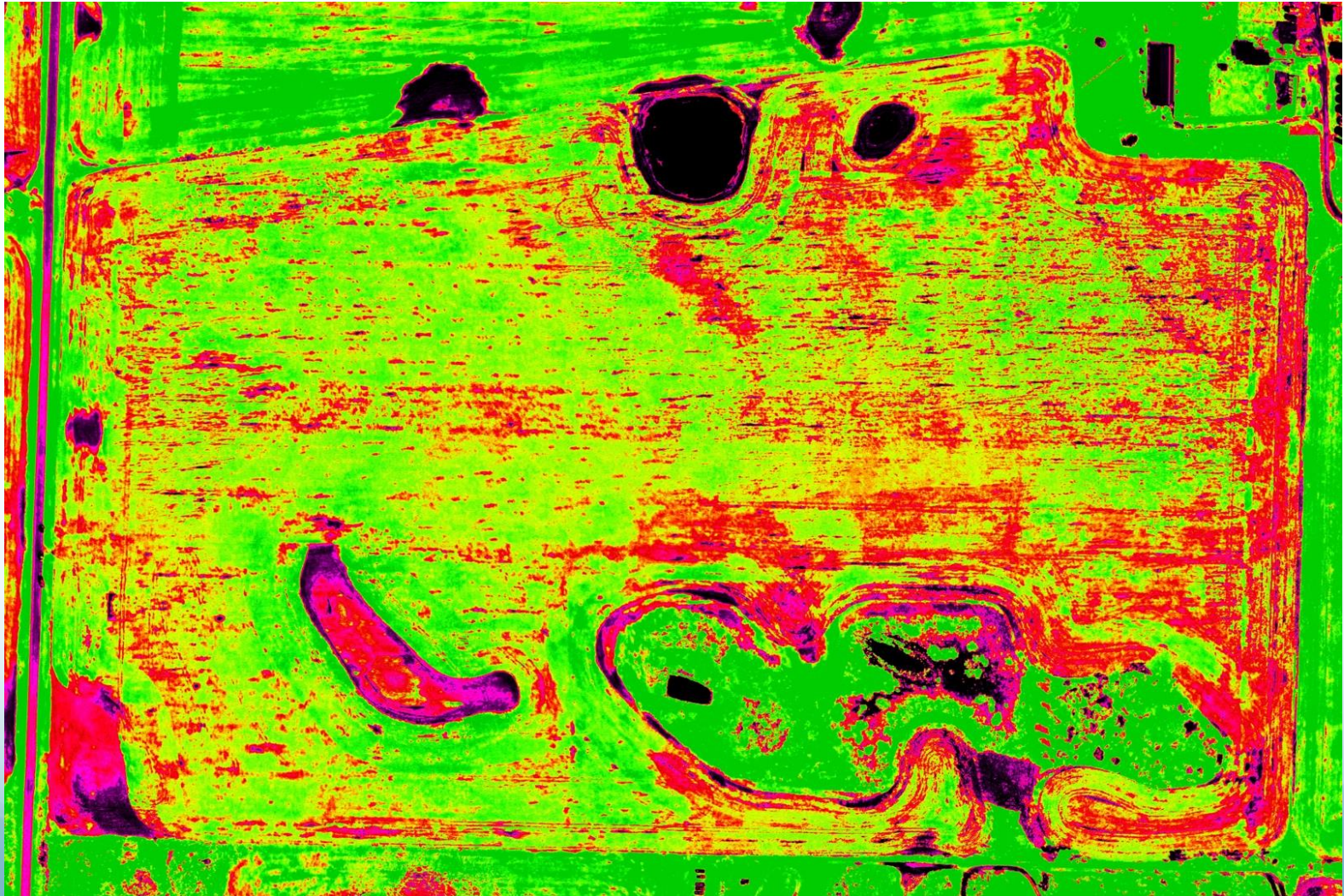
VIS Orthomosaic



NIR Orthomosaic



NDVI Orthomosaic



Technologies Behind Us

Fixed-Wing and Multi-Rotor UAVs:



Technologies Behind Us

Industry-Leading Autopilots

- Highly reliable
- Able to fly both fixed wing and VTOL UAVs
- Support autonomous takeoffs and landings
- 1,000 programmable waypoints or commands
- Support flaps, flaperons, elevons, v-tail, x-tail, split rudders, split ailerons and flap/aileron mixing
- Extensive data logging and flight analysis capability
- User programmable error handlers for: loss of GPS signal, loss of RC signal, engine failure, loss of datalink, and low battery voltage.

Technologies Behind Us

- Long-range wireless video transmitters and radio modems (7-14mi)
- 3-axis camera gimbal stabilization systems (roll, pan, tilt) on multi-rotor platforms
- Long-range UHF RC transmitter systems allowing flights of up to 40Km away with full manual control
- Long flight duration LiPo battery packs (smaller, lighter, more powerful than ever)

Future Technologies

- Thermal Imaging Cameras
 - Identifying hot spots in sugar beet stock piles
 - Inspecting buildings for heat loss areas
- Hyperspectral imagers for UAVs
- In-field image acquisition and processing system to generate precise maps of crop field performance on site.
- In general, systems that are compact, lightweight, fast, consistently reliable and easy to use)

Other Applications

- Real Estate
 - Home Inspections
 - Construction progress documentation
 - Land development surveys
- Golf Courses
 - Turfgrass care
 - Golf course reconstruction
- Land Conservation
 - Wetland mapping
 - Invasive weed species mapping

THANK YOU FOR YOUR TIME!



QUESTIONS?