



FARM FLIGHT

What Is Farm Flight?

Farm Flight is a precise agricultural mapping service that combines high quality imagery with accurate diagnostics about plant health and field structure. Drones are used to fly over fields, taking thousands of pictures to stitch together. From these pictures, infrared data and GPS information can be extracted, forming geographical maps that are more accurate than any satellite system in service today. These ultraprecise maps can be used to locate problem areas in fields, even before problems are able to be seen by the human eye. Using infrared pictures, it is possible to tell which crops are being over watered, or are not receiving enough fertilizer. This can save time and money in the long run. Instead of fertilizing the entire field more, we provide you with the exact area and gps coordinates of poorly performing crops.



Why Farm Flight?

Satellite imagery is fairly popular amongst farmers. Similar services allow for pictures to be taken of crops daily. There are some key differences though:

Accuracy

Farm Flight is 40 times more accurate than traditional mapping services. With our state of the art software, it is possible to see individual heads of corn. Compare these two images to see the difference:

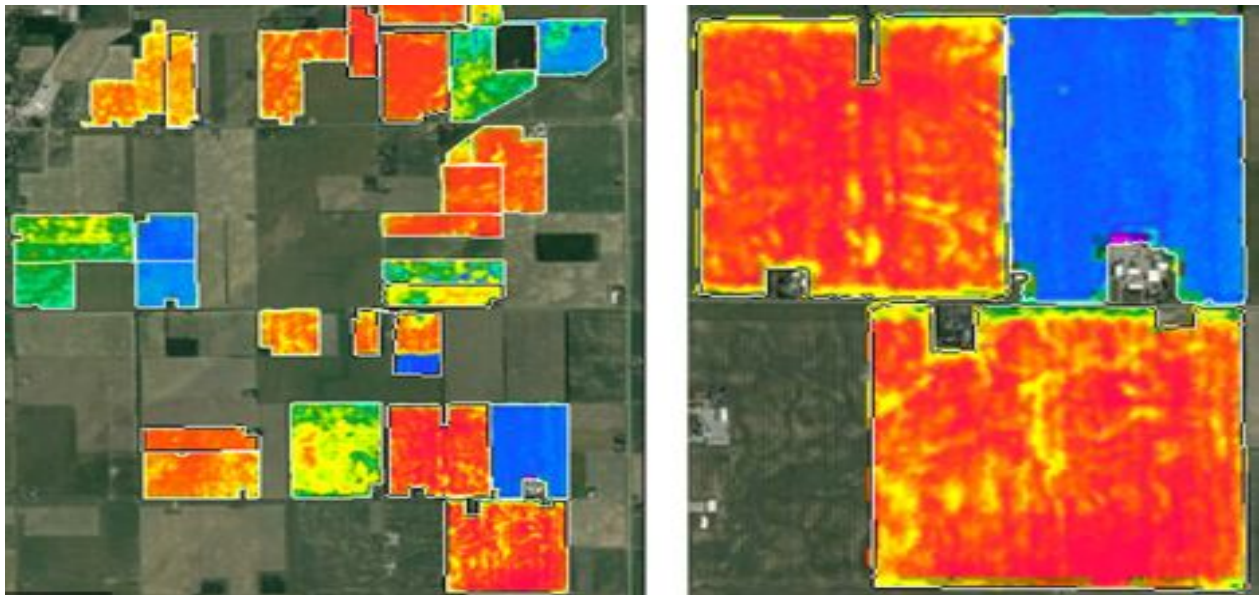


Fig. 1: Our competitors

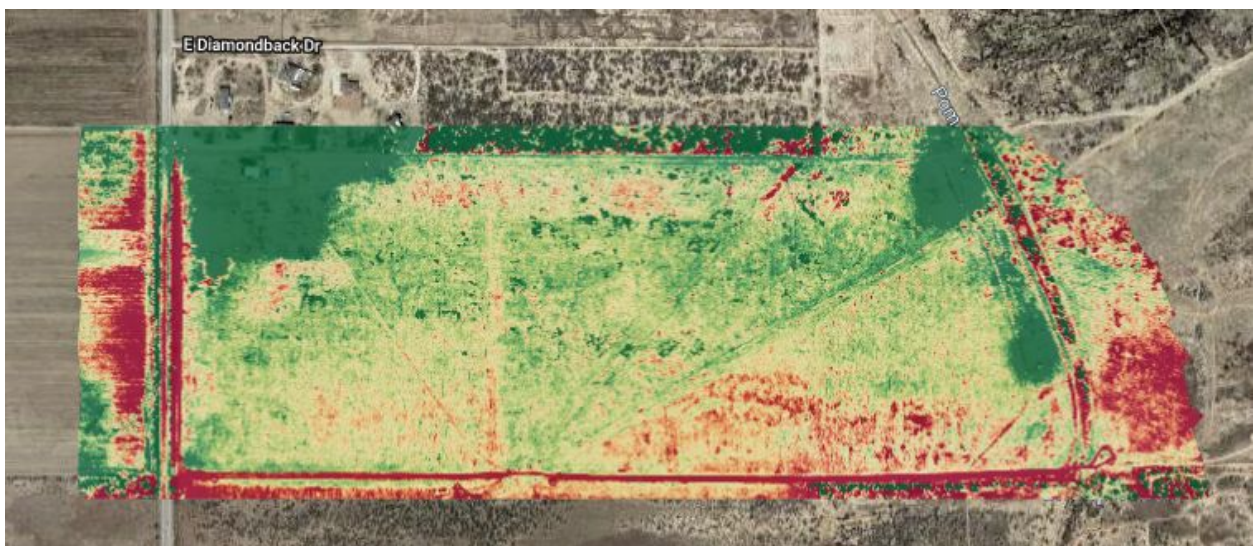


Fig.2 Farm Flight

Cost

Farm Flight is cheaper than other satellite and drone mapping services. On average, we cost 30% less per acre than other businesses while offering gps imagery at 40 times more accurate than satellite services. We have optimized our business model to cut costs for the client and keep our services affordable. Our goal is to help farmers maximize their profits in an environmentally friendly way. By knowing where problem areas are, clients can change watering regimens during planting seasons and check fertilization levels in the winter to maximize profits without over pumping and over saturating fields. This includes access to the drone deploy app, where you can view and manipulate the images to find important information relating to your crops.



Agremo Partnership

We have partnered with this tech company in order to bring the best possible product to market at an extremely affordable price. Agremo has created a software that can analyze fields 12 different ways with 98% accuracy. These analyses can help farmers catch problems before they cause damage and find quick cost effective solutions.



Stand Count Report

Count your plants and determine accurate stand establishment, and you will find out sowing quality and your potential yield loss.

Plant Population Report

Get accurate plant counts from your survey. Perfect for counting your perennial plantations. Count plants in any kind of rows including different orientation angle rows.

Plant Stress Analysis

Find out how internal and external parameters affect your crop health during mid to late growth stages.

Weed Analysis

Identify weeds before they spread. Use the precise and reliable data to optimize pesticide usage and crop sprays.

Pest Analysis

Identify pest infested areas and optimize pesticide usage through early detection.

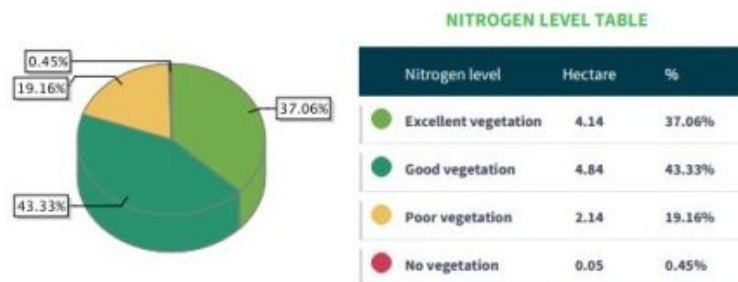
Plant Disease Analysis

Allows powerful insights into vegetated areas and their current condition. This analysis enables you to analyze crops of all growth stages.

Flowering Estimator

Helps detect crop flowering levels, easily evaluate the plant growth stage and make better crop management decisions.

PLANT HEALTH MONITORING		NITROGEN STATUS	
Crop:	Corn	Field area:	11.17 Hectare
Growing stage:	V6-7	Analysis name:	Nitrogen status



TOTAL AREA DEFICIENCY OF NITROGEN IS:
2.19 ha = 20% of the field

Eagle Eye

Eagle eye reports let you mark points of interest, calculate the distance between different points, determine the size of any area on your field and many more.

Nitrogen Status in Crops

Get to know exactly where to apply crop nutrients and in which amount. By knowing this, you can save on fertilizer, fuel and mechanization costs, even prevent potential plant stress.



Waterlogging Analysis

Identify all of your waterlogged areas within two days and reduce the impacts of waterlogging, regardless of the field size and crop sort.

Drought Analysis

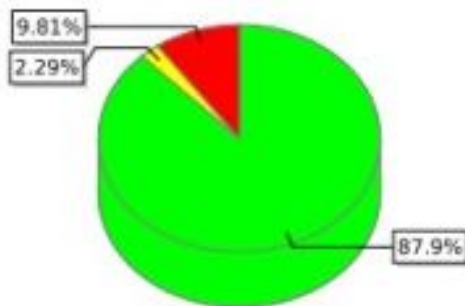
Within two days, identify and quantify all the plants with drought stress, their current drought status and areas of varying drought conditions.

Canopy Analysis

Get the detailed report about the canopy/leaf area and ground cover area, vegetation conditions and primary plant productivity.

PLANT HEALTH MONITORING	WEED ANALYSIS
Crop: oilseed rape	Field area: 15.26 Hectare
Growing stage: 85 days	Analysis name: Weed Stress

STRESS LEVEL TABLE



Stress level	%	Hectare
Fine	87.9%	13.41
Potential weed stress	2.29%	0.35
Weed stress	9.81%	1.5

Diagnostics

Our service does not only provide the data needed to optimize your farm, we also help you understand how to implement the data we provide. Whether it is a phone call or email, we will provide personalized information on your fields marking problem areas so you don't miss anything. We provide real time support to aid you in making the most out of our service.

Non Invasive

Unlike many mapping services that can provide this level of accuracy, our surveys are non invasive. In fact, we do not need to enter the property at all. Drones can be launched and landed remotely without ever touching the field, giving you peace of mind and reducing liability.

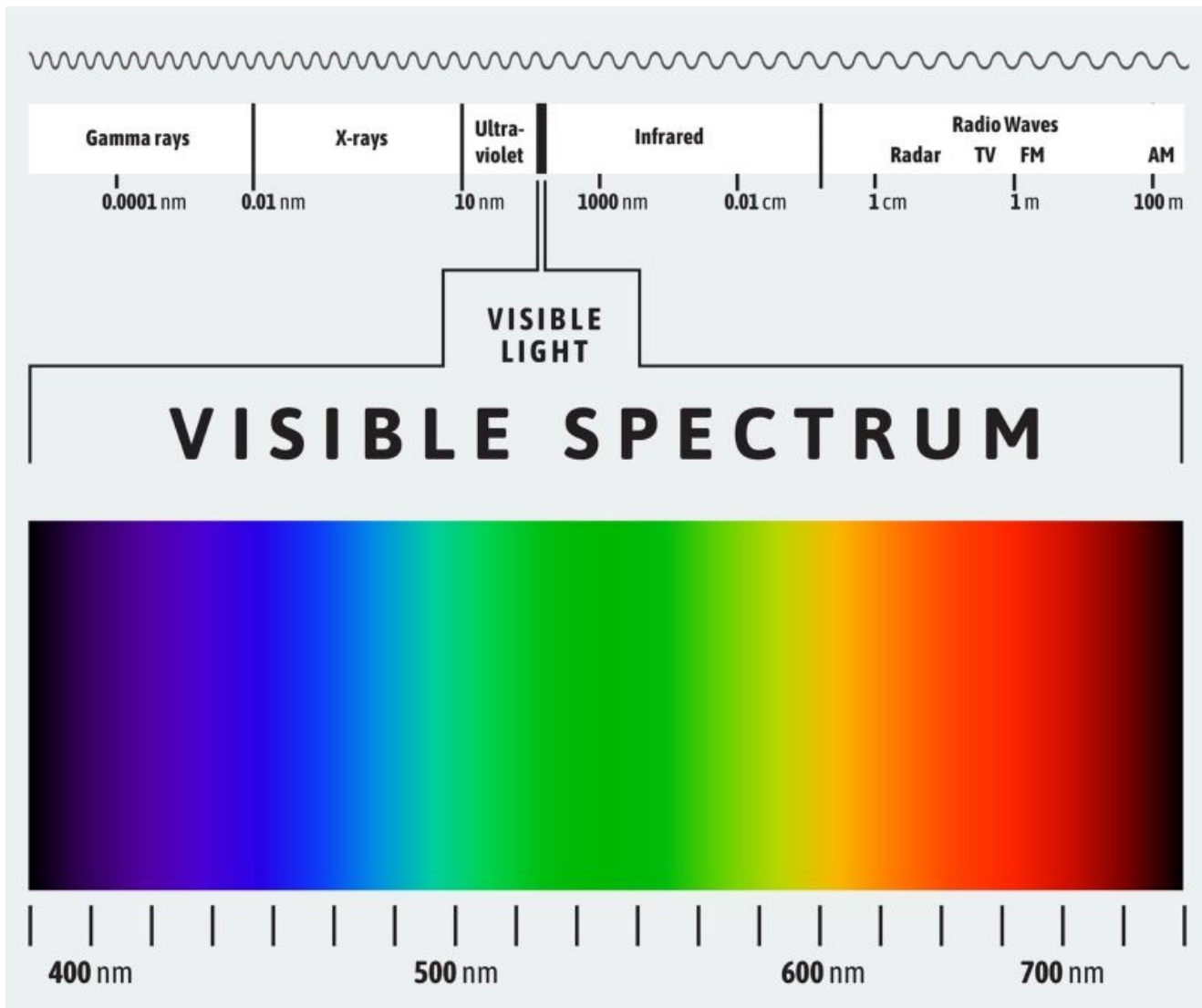
Data Security

Farm Flight uses algorithms and computer generated APIs to analyze data securely, meaning your field information will never be seen by anyone other than our team of specialists and the people you choose to share the data with.



How It Works

The drone uses GPS to fly over the field in a lawn mower pattern, taking pictures that overlap by 80%. When all of these images are stitched together, they form an orthomosaic map that is able to be converted into a 3d rendering. This shows the subtle contouring of the field and illuminates low and high spots that could cause issues in providing even watering to large areas of land. In every one of these pictures is also infrared data that is invisible to the human eye. Healthy plants absorb infrared light but unhealthy plants emit infrared light, so by recording which plants are emitting light on this frequency, we can preemptively locate potentially problematic areas before they cause irreversible damage.



We Are Ready

Our business model is perfectly scalable to meet our clients needs. With a network of pilots all across the country, we are ready to fulfil any and all demands that come our way. Based out of Tucson, we are centrally located to the Arizona agriculture industry, but we are capable of executing flights all across the United States at the same low price. Because of our infrastructure, we have extremely fast turnaround time, never exceeding 2 days. We are looking forward to helping you optimize your next harvest!

