

TURN  OUT

**NEXT
GENERATION
FARMING**



Transforming farmers to celebrities



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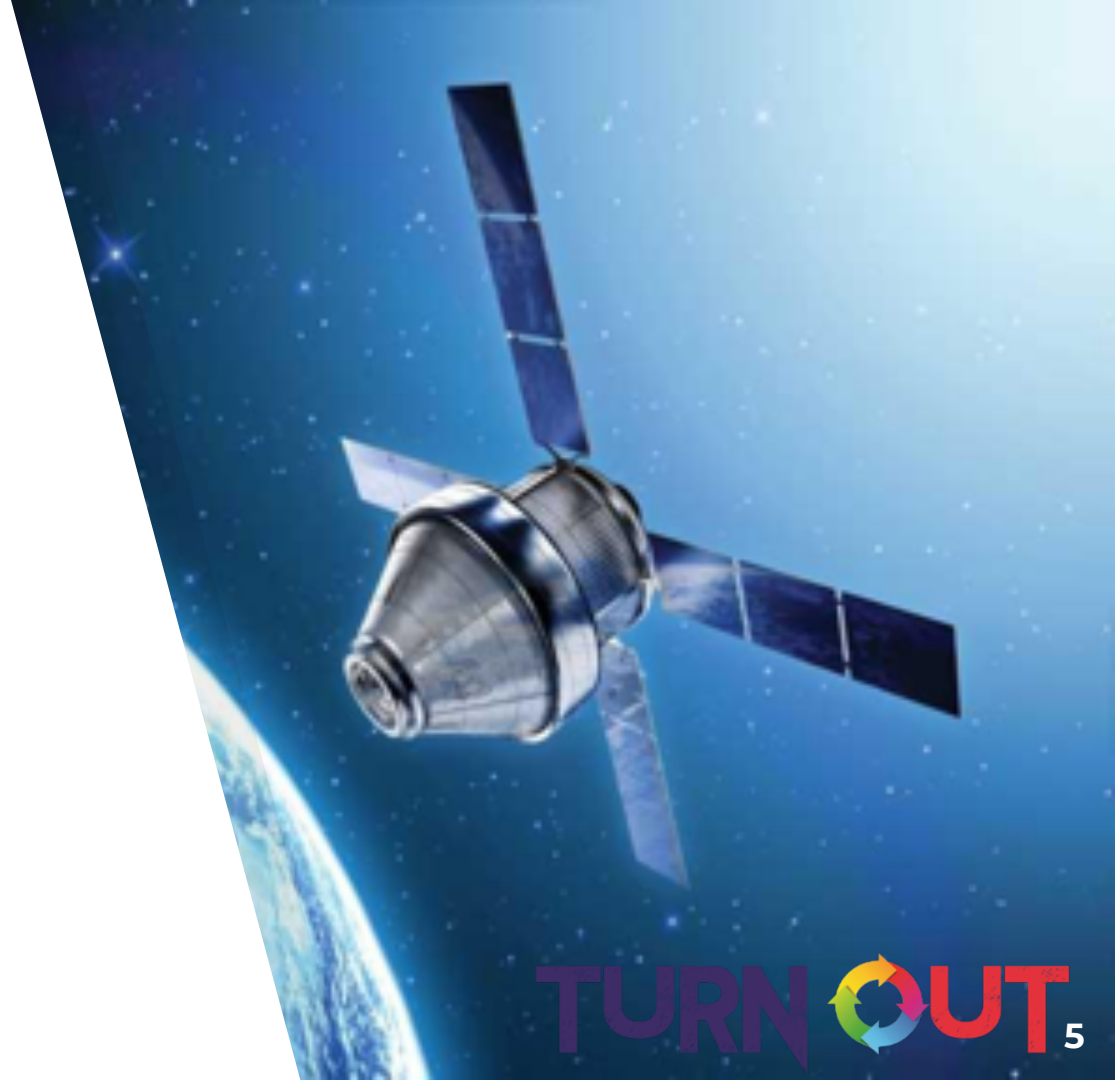


WHAT IS Precision FARMING?

Next generation precision

WHAT IS Precision FARMING?

- ▶ NXT Farm is a web-based platform leveraging satellite technology for more precise agricultural insight
- ▶ This **proprietary** technology allows for the management of any fields remotely with just the click of a button



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"The global food system is under **chronic pressure** to meet an ever-rising demand... in this scenario, global society essentially **collapses** as food production **falls permanently short** of consumption."

- *The Independent*, 2015



THE SITUATION

The current state of agriculture in india generally and specifically in Andhra Pradesh & Telangana

THE SITUATION:

MACRO LEVEL

- ▶ The Agriculture industry **employs** over **50%** of the Indian population and accounts to almost **20%** of India's **GDP**
- ▶ India has over **444 Million acres** of cropland equaling almost **10%** of the **global** cropland!
- ▶ Almost **70%** of India's farms are held by marginal farmers



THE SITUATION:

MICRO LEVEL

Andhra Pradesh & Telangana

- ▶ **Andhra Pradesh** contributes **77%** of crop production in India
- ▶ In **Andhra Pradesh**, **62%** of the population engaged in agriculture
- ▶ In **Telangana**, **56%** of the population engaged in agriculture
- ▶ Agriculture makes up a large piece of Telangana's and Andhra Pradesh's local economy



OUR SOLUTION:

- ▶ Affordable, accessible, precision agriculture for farmers worldwide
- ▶ An easily learnable tool, which does require the user to be literate to use, to help farmers maximize yields and minimize input costs
- ▶ Boost farm efficiency and production to meet the demands of the food supply for the **next generation**

1

AS EASY AS 1, 2, 3

Log In



[Home](#)

[Meet the Team](#)

[Contact](#)

[Login/Sign up](#)

Log into NXT Farm

Email Address

Password

Log In

Forgot Password?

[Create an Account](#)

[Log in with Google](#)

[Log in with Facebook](#)

TURN OUT

AS EASY AS 1, 2, 3

2 Select your **Field**

[Home](#)[Add Forms](#)[Graphs](#)[Profile](#)

TURN  OUT

AS EASY AS 1, 2, 3

3

Receive The Results!





THE NXT ALGORITHMS

The technology boosting yields globally

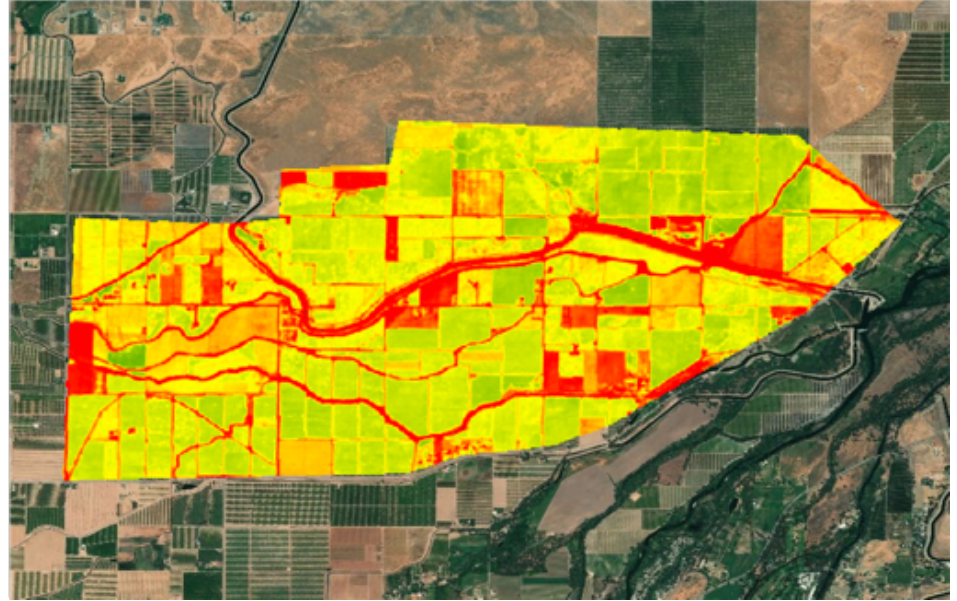


VEGETATION HEALTH

Monitor crop
vitality in
real time

VEGETATION HEALTH

- ▶ NDVI that catches disease and pest outbreaks as they happen
- ▶ Industry standard, yet directly linked to our other algorithms to create an unmatched synergy.



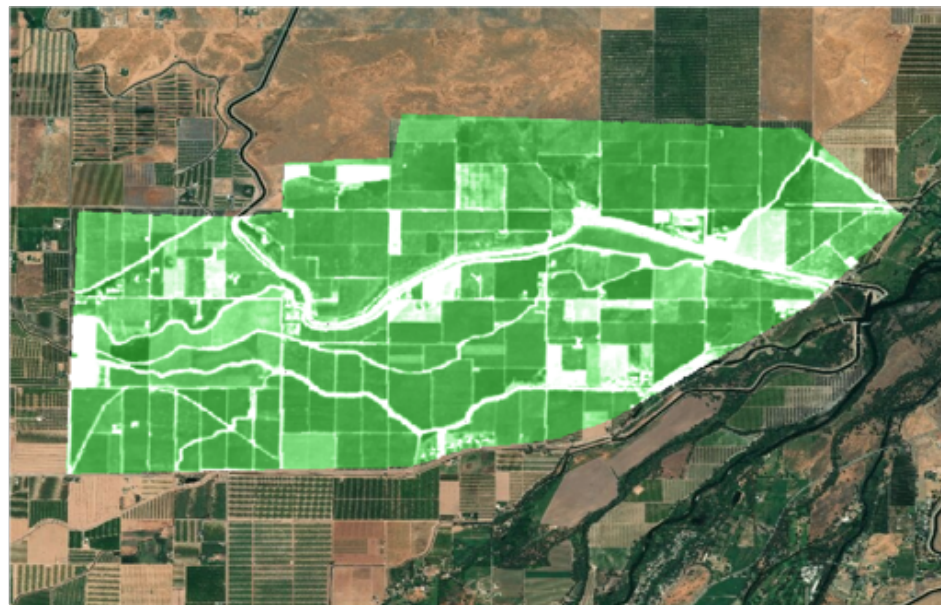


SOIL NUTRTION

Conquer fertility
issues with
satellite insight

SOIL NUTRITION

- ▶ Fully ground truthed for full accuracy.
- ▶ Spot-target problem areas, maximize fertilizer efficiency and update variable rate prescriptions.
- ▶ Save time on soil sampling, spend more time on what matters most.



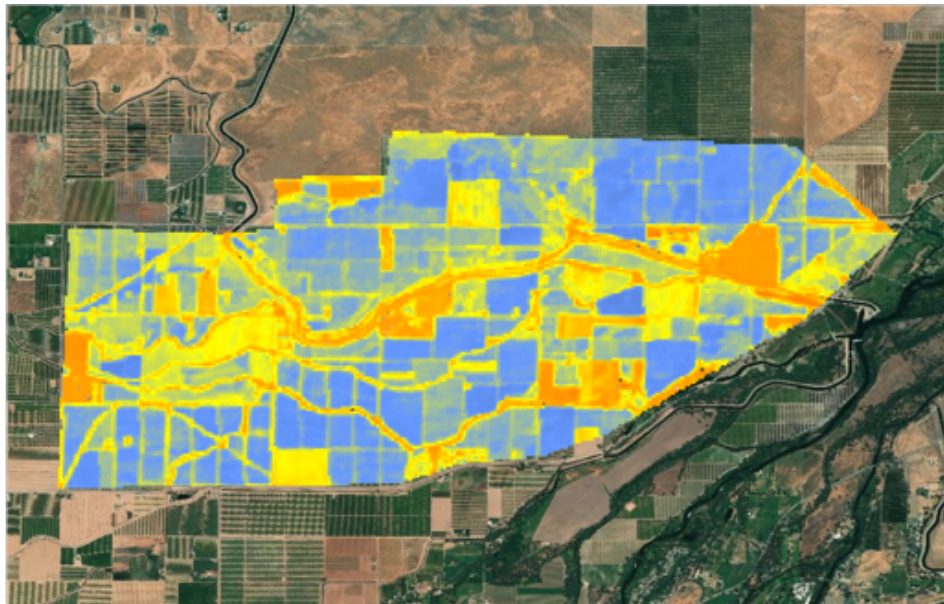


CROP WATER STRESS

Stop hydration
issues before
they strike

CROP WATER STRESS

- ▶ Consistent insight into crop hydration that conquers canopy growth
- ▶ Detect water issues 1 week before they visually affect your crops; a proactive, predictive & unprecedented tool





RADAR SOIL MOISTURE

Monitor
moisture levels,
protect your
yields

RADAR SOIL MOISTURE

- ▶ Uses radar satellite to overcome cloud cover & measure moisture within the top 15cm of your crop
- ▶ Save the precious time and money you might've spent tirelessly monitoring moisture sensors.





CROP DISEASE PREDICTION

Catch disease
before it infects
your bottom line

CROP DISEASE PREDICTION

- ▶ Uses a cutting edge AI that combines our algorithms with historical & weather data to assess the at-risk areas of your fields
- ▶ Provides percentage risk estimates, mitigation plans & more; an essential defense for your crops and profits



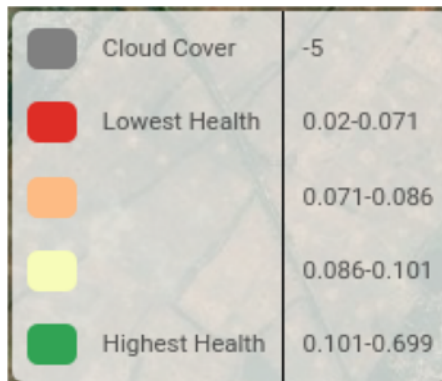
REAL WORLD ANALYSIS

Analysis of plots within Andhra Pradesh
and Telangana

Field Yield Analysis:

The cluster of fields in this image is in **Andhra Pradesh**, just north west of Machilipatnam. It is believed to be growing **rice**. This application works accurately across a **large variety** of **crops** allowing for accurate results across the board!

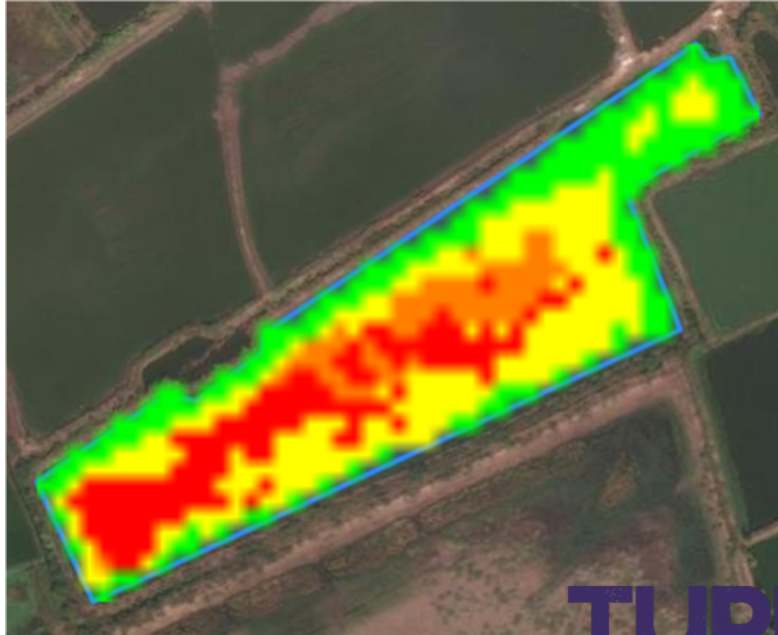
Yield variation in these fields can **clearly** be seen and **accurately measured**. Through this image alone it is made clear which fields are the highest performing (green) and which are lowest (red). Using yield data from previous years this 0-1 scale can be turned into an accurately estimated yield for each field. Lagging fields can be identified and management practices can be improved to **increase** the **nation wide food production**. This analysis was done for 2019 in July, but in practice would be applied to crops as they are growing to predict yield and identify deficiencies.



In-Field Issue Detection:

This image is using the **Vegetation health algorithm** which measures the chlorophyll content of crops and identifies in **field variation**. It is a good proxy for future yield and biomass in the area. This algorithm is also used to identify pests and disease that are affecting the canopy.

The field below from **Andhra Pradesh** clearly shows a **lack of development** in the **middle of the field**. This could be from pests or more likely a region with excessive water that was not properly removed after draining the field, i.e. drainage issue.



In-Field Issue **Detection:** (Continued)

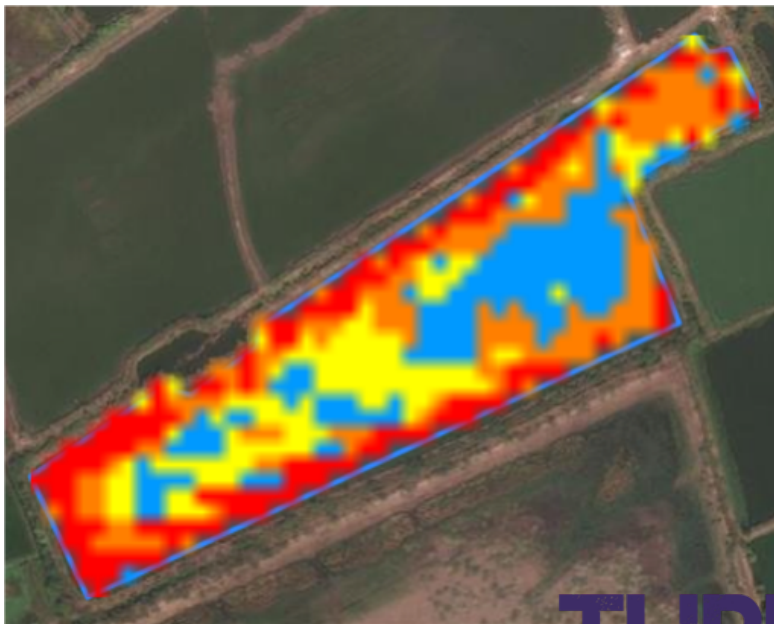
Soil Nutrition looks at the crop nitrate content of the crops and this is used for **identifying nutrient needs**. It allows for the variable application of nitrogen fertilizers throughout the field and it can also be used to identify deficiencies and re-application needs as the season continues.

This field appears to be deficient on the right side. This is likely due to a natural angle in the earth that caused water to pool with nutrients on the left side. This field's yields could be improved by re-applying nitrogen during the growing season.



In-Field Issue **Detection:** (Continued)

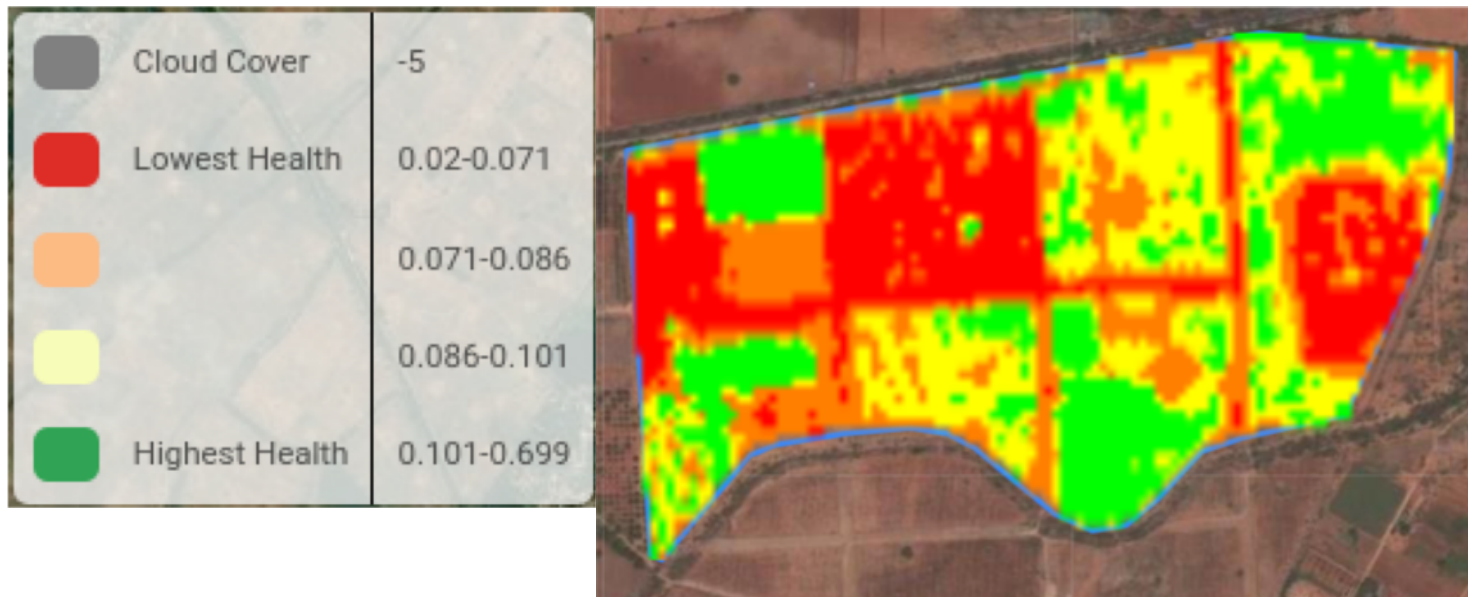
Crop Water Stress looks at the **water content** of the **crops**. This is derived from looking at the thermal signature of the crops which correlates to how much water is being evaporated from the crop, thus how much it currently contains. This method is currently the earliest detection mechanism for a variety of crop diseases which start by affecting the root and stem of crops. It is also useful for identifying when to irrigate and when **adequate** levels of **water stress** are reached for **optimizing yields**.



The image confirms the suspicion from the vegetation health portion of the analysis. There is **excessive water** in the center of the field which has caused **yields** to **decline**. This water pooling is likely to cause mould to form which can completely kill the crops. Identifying this now allows the owner of the field to improve drainage in order to eliminate this issue.

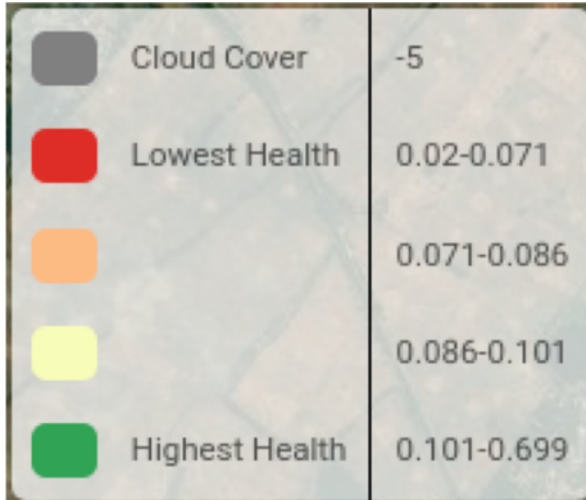
Field Yield Analysis:

The cluster of fields in this image is in **Telangana, South West of Hyderabad**. It is believed to be growing **Corn**. Similar to the previous example the yield variation is **clear** throughout the fields. This can be done on a **massive** scale where every field in the state is monitored.



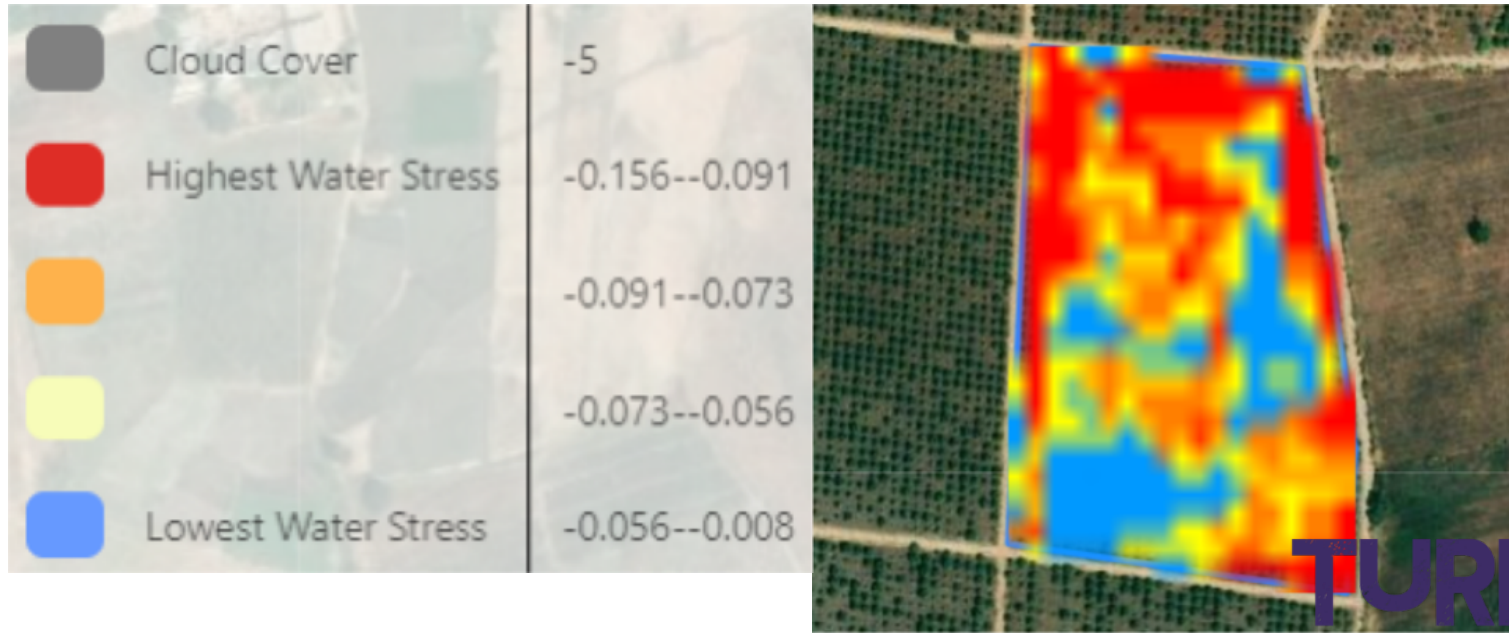
In-Field Issue Analysis:

Below is what looks like a **tree** farm which is also **South West of Hyderabad**. You can look at the legend to see relative values (all algorithms range from -1 to 1). This imagery was taken during the peak growing season and you can see that **vegetation health** (ndvi) is in a good **healthy range** for this crop (around 0.3).



In-Field Issue Analysis:

The **crop water stress** is **extremely high** on the other hand with values going as into the **negatives** thus meaning this is hitting **drought**. This shows that the irrigation done here is not being managed properly. **The farmer is waiting too long to water the crops**. It won't necessarily make them yellow but this will cause a **reduction in the yield** at the end of the day.



In-Field Issue Analysis:

Crop nitrogen for this field is **adequate** showing that the **crop water stress** is very likely not disease or pest related but is in fact **poor irrigation practices**. It's also important to note that **nitrogen** is quite **high** and without adequate water it won't adequately be utilized and can actually become **toxic** to the crop. This is one of the mechanisms that decreases yield when water stressing a crop too much.





NXT FARM X-FACTORS

Where design makes the difference

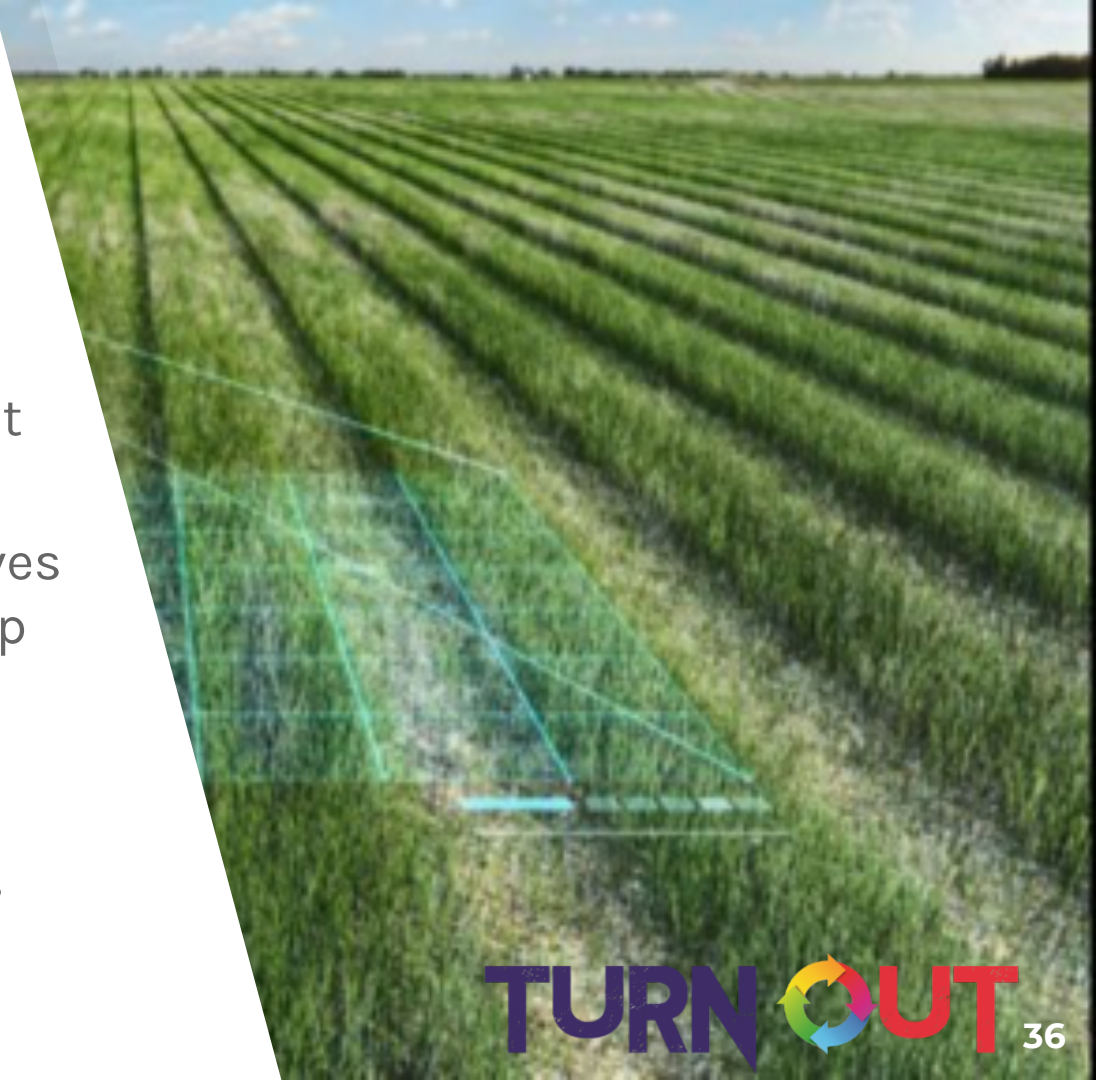
NXT FARM X-FACTORS

- ▶ Our API, combined with mass exporting of data, allows for full integration with your workflow
- ▶ Gain fully ground truthed data multiple times weekly without stepping foot in your fields
- ▶ The only predictive satellite algorithms available to defend your yields.



NXT FARM X-FACTORS

- ▶ Easy to use, so a farmer would only need to spend 5 minutes per day looking at the data, but still achieve amazing results.
- ▶ Currently, satellite imagery gives them no predictive ability. Crop water stress and crop disease prediction will allow them to actually get predictive ability and therefore save more crops before they're lost.



3,000,000+

Acres currently managed

15,000,000+

Acres currently being onboarded

10,000+

Ground truthed points for maximum accuracy



THANK YOU

