

LIMS MONITORING & REPORTING

USER MANUAL



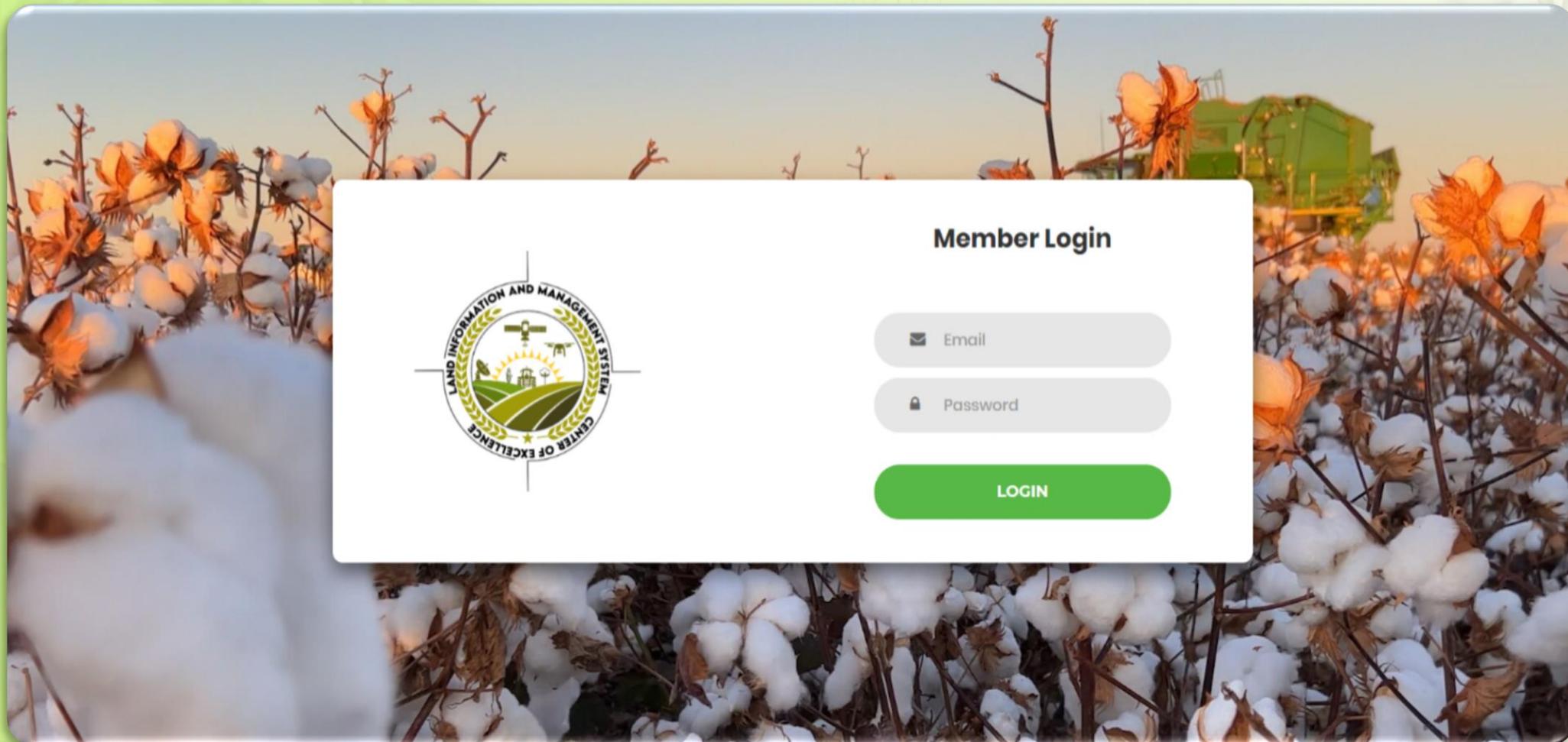
Quick overview

- Login to LIMS Monitoring Tool.
- Mark farm after geo locating.
- Enter farm name.
- Go to monitoring dashboard.
- Start monitoring.



Login to LIMS Monitoring Tool

Step 1: Go to <https://limspakistan.com/agrimonitoring> and login using credentials shared at your email.



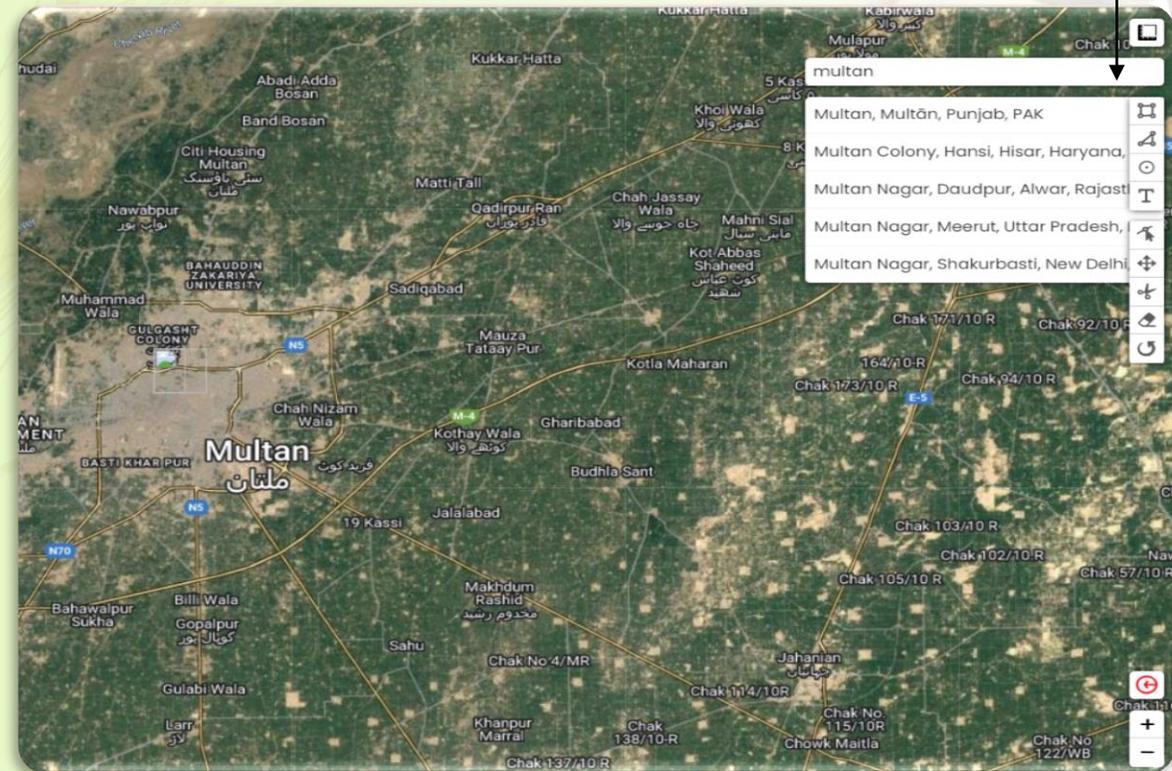
Geo Locate Farm

There are two ways to geo locate farm:

Enter Latitude and Longitude in search box.



Enter district name and manually navigate to farm.



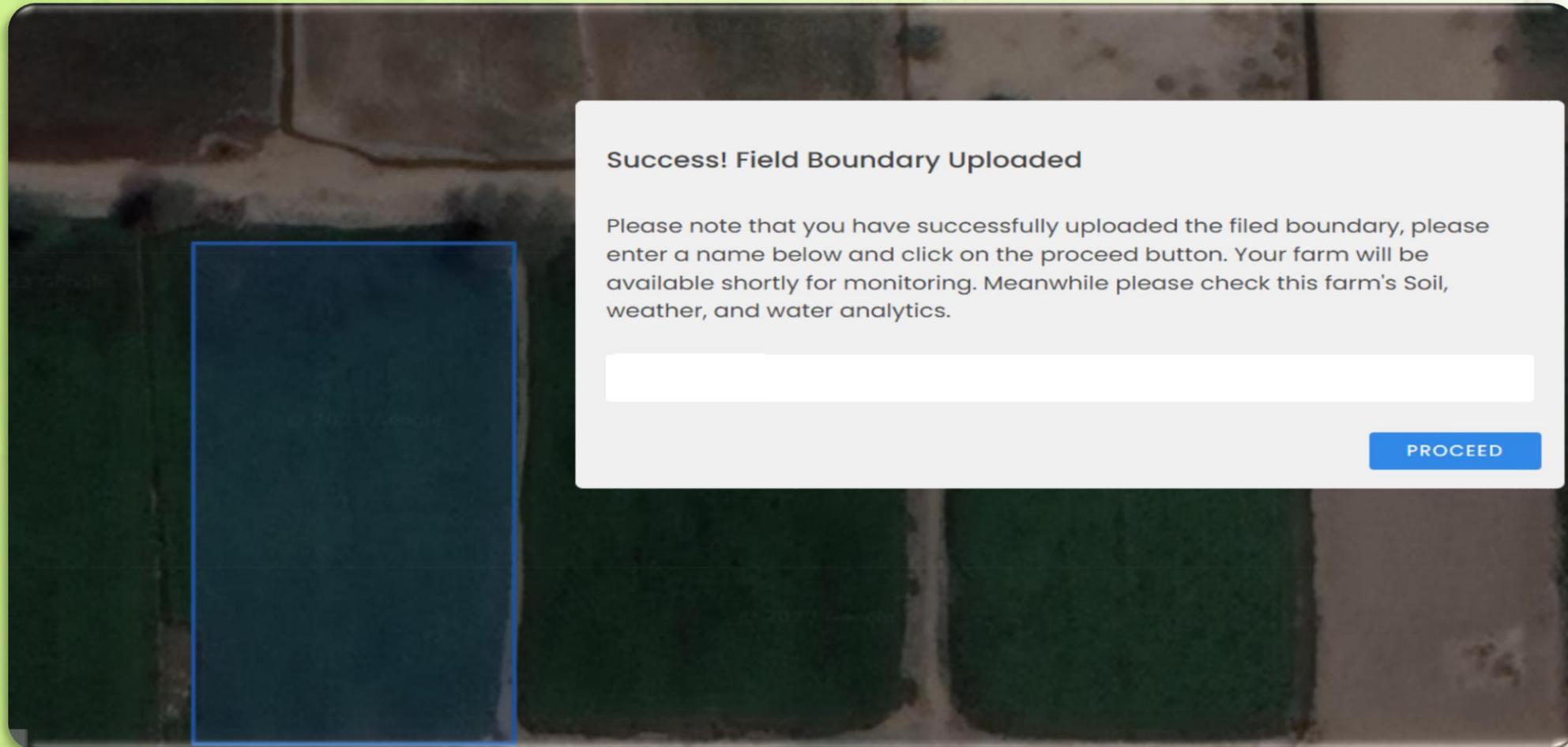
Draw farm boundary

Step3: After geo locating the farm, user need to indicate farm area by drawing map boundaries (**Tools to draw map boundary are highlighted below**).



Upload Farm

Step 4: After finish marking the area, prompt will appear to ask user to give your farm a name. User can enter any custom name so that it can be easily retrieved. After entering farm name, user need to press proceed button and it will initiate farm uploading.



Farm's parameters

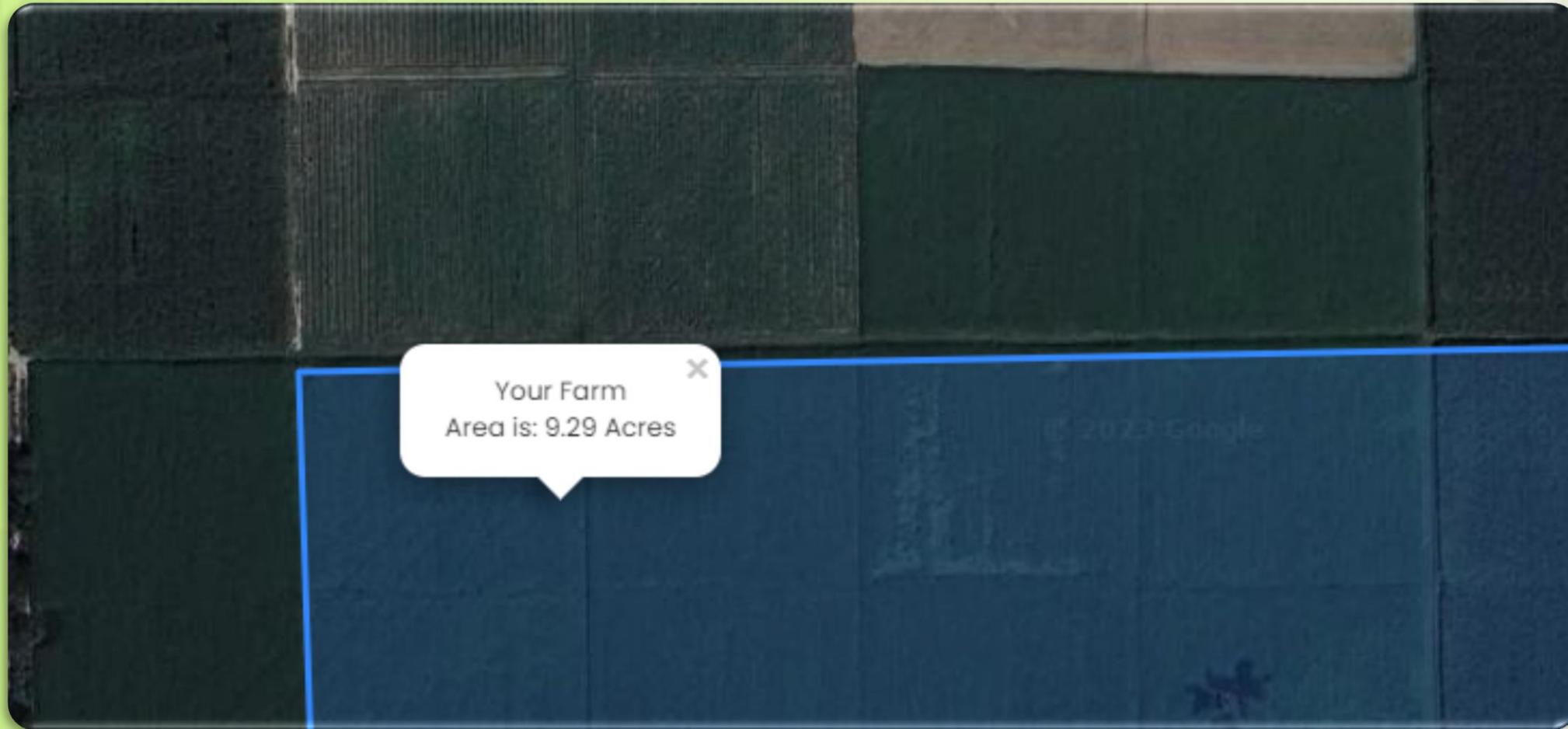
While Farm upload is in progress, user can check:

- Area of marked farm in acres.
- Agrometeorology data.
 - Current conditions.
 - 14 – Days forecast.
- Soil attributes.
- Crop water requirements.
 - Including time to irrigate area.
- Ground water attributes.



Area of Farm

User can check above mentioned parameters by clicking anywhere on the farm



Weather forecast

32 °C

Windseed: 7 (Miles)
Rainfall: 0.0 mm
Humidity: 63 %
Cloudcover: 75%
Current Observations

33 °C

Windseed: 12 (Miles)
Rainfall: 0.2 mm
Humidity: 50 %
Patchy rain possible
Observations for: 2023-09-20

36 °C

Windseed: 15 (Miles)
Rainfall: 0.0 mm
Humidity: 39 %
Sunny
Observations for: 2023-09-21

37 °C

Wind Speed: 17 (Miles)
Rainfall: 0.0 mm
Humidity: 36 %
Sunny
Observations for: 2023-09-22

36 °C

Wind Speed: 15 (Miles)
Rainfall: 0.5 mm
Humidity: 35 %
Patchy rain possible
Observations for: 2023-09-23

34 °C

Wind Speed: 14 (Miles)
Rainfall: 0.0 mm
Humidity: 40 %
Sunny
Observations for: 2023-09-24

31 °C

Wind Speed: 13 (Miles)
Rainfall: 1.7 mm
Humidity: 50 %
Patchy rain possible
Observations for: 2023-09-25

30 °C

Wind Speed: 10 (Miles)
Rainfall: 0.2 mm
Humidity: 51 %
Patchy rain possible
Observations for: 2023-09-26

32 °C

Wind Speed: 13 (Miles)
Rainfall: 0.1 mm
Humidity: 42 %
Patchy rain possible
Observations for: 2023-09-27

31 °C

Wind Speed: 9 (Miles)
Rainfall: 1.1 mm
Humidity: 46 %
Patchy rain possible
Observations for: 2023-09-28

29 °C

Wind Speed: 20 (Miles)
Rainfall: 2.1 mm
Humidity: 53 %
Patchy rain possible
Observations for: 2023-09-29

31 °C

Wind Speed: 6 (Miles)
Rainfall: 0.0 mm
Humidity: 40 %
Sunny
Observations for: 2023-09-30

33 °C

Wind Speed: 8 (Miles)
Rainfall: 0.0 mm
Humidity: 30 %
Sunny
Observations for: 2023-10-01

33 °C

Wind Speed: 8 (Miles)
Rainfall: 0.0 mm
Humidity: 25 %
Sunny
Observations for: 2023-10-02



Soil, Groundwater and Crop water requirements

Soil Condition

Soil OM: 0.67 %

Soil K: 166.00 ppm (Satisfactory)

Soil pH: 8.20 (Slightly Alkaline Soil)

Soil P: 8.15 ppm (Medium)

Soil Type: Clay Loam

Soil EC: 2.00 dS/m (Non-Saline)

Soil Zinc: 0.70 ppm

Soil Calcium carbonate: 10.24 %

Soil Copper: 0.30 ppm

Soil Saturation: 54 %

Soil Iron: 4.80 ppm

Soil Boron: 0.70 ppm

Soil Maganese: 0.80ppm

Groundwater

Water EC: 0.60 μ S/cm (Fit)

Sodium adsorption ratio : 1.24 (Fit)

Please select date range to calculate Crop water needs

< September 2023 >

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
| 27 | 28 | 29 | 30 | 31 | 1 | 2 |
| 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

water needs

For calculations of Crop water requirements, user need to click on the area and select the dates interval

Please select date range to calculate Crop water needs

2023-09-11 to 2023-09-18

Calculate Crop Water Requirements

After selecting dates, click on calculate button



Crop water requirements

Enter area in acres and press calculate button

Select Crop(s)

Cultivated Area

Calculate Crop Water Requirement



Export to xls



Export to csv



Export to txt

| Date | Et0 (mm) | Temprature | Humidity | Sunshine | Wind | Altitude |
|------------|----------|------------|----------|----------|-------|----------|
| 2023-09-11 | 9.35mm | 36 C | 29% | 12.7 | 9 m/s | 125 |
| 2023-09-12 | 8.93mm | 37 C | 27% | 12.7 | 8 m/s | 125 |
| 2023-09-13 | 9.56mm | 37 C | 24% | 12.7 | 9 m/s | 125 |
| 2023-09-14 | 9.39mm | 37 C | 26% | 12.6 | 9 m/s | 125 |
| 2023-09-15 | 7.99mm | 38 C | 24% | 12.6 | 6 m/s | 125 |
| 2023-09-16 | 8.2mm | 38 C | 30% | 12.6 | 7 m/s | 125 |
| 2023-09-17 | 8.28mm | 35 C | 44% | 12.6 | 9 m/s | 125 |
| 2023-09-18 | 7.79mm | 31 C | 53% | 12.2 | 9 m/s | 125 |



Crop water requirements

After clicking calculate button, user will be able to view irrigation values.

| Date | Et0 (mm) | CWR (Cubic Meter) | (Inches) | Temperature | Humidity | Sunshine | Wind | Altitude |
|--|----------|-------------------|----------|-------------|----------|----------|-------|----------|
| 15-09-2023 | 7.99 | cotton = 333.44 | 0.35 | 38 C | 24% | 12.6 | 6 m/s | 125 |
| 16-09-2023 | 8.2 | cotton = 342.2 | 0.36 | 38 C | 30% | 12.6 | 7 m/s | 125 |
| 17-09-2023 | 8.28 | cotton = 345.54 | 0.36 | 35 C | 44% | 12.6 | 9 m/s | 125 |
| 18-09-2023 | 7.79 | cotton = 325.09 | 0.34 | 31 C | 53% | 12.2 | 9 m/s | 125 |
| Cubic meter volume of water needed: 2899.97 | | | | | | | | |
| Inches volume of water needed: 3.04 | | | | | | | | |
| Cubic feet volume of water needed: 102412.44 | | | | | | | | |
| Seconds per acre of irrigation: 128015.55 | | | | | | | | |
| Time to Irrigate: 21.34 | | | | | | | | |



Email alerts



[Download KML to visualize](#)

Hey Nabeel,

Thank you for using LIMS Pakistan Monitoring Tool, We have received your request for Farm Umar_farm and we will update you shortly.

Meanwhile you can check:

Important parameters of soil which give information about the soil fertility.

Current weather, weather forecast

Crop Water Requirements

[Explore More](#)

After user has pressed proceed button, it will initiate farm uploading so that user can start the monitoring.

User will also receive email alert that farm upload is in progress in the start and when farm is uploaded, user will simply press the Start Monitoring button and it will take user to monitoring dashboard. Please note that user can see farm name entered in Step 4, same will be used to search the farm on monitoring dashboard.



Hey Nabeel,

Thank you for using LIMS Pakistan Monitoring Tool, Your farm **Umar_farm** is now available for monitoring. Please click on the button below

[Start Monitoring](#)

Start Monitoring button will take you right to monitoring dashboard.



Monitoring dashboard

User need to enter farm name received on mail / entered in step 4, in the search area

further add Start Date (2020-01-01) and end date (Current date)

Now Choose Date from display indices (Try to choose latest date and it should not exceed from 10 days prior to current date).

The screenshot displays the LIMS Crop Monitoring Dashboard interface. At the top, there is a search bar with the text "Search places". Below the search bar, the dashboard title "LIMS Crop Monitoring Dashboard" is visible. The main content area includes a search input field containing "742QuaidabadBandialShu". Below this, there are date selection fields for "Start Date" (2020-01-01) and "End Date" (2023-08-31). A "Display Indices" section contains a dropdown menu currently set to "Sentinel Dates". Below this, there are two more dropdown menus labeled "Indices" and "Zoning", both currently set to "Map Index". The "Index Values" section includes a note "Click on map to get Selected Index Value" and a "Download Index Image:" button. At the bottom of the dashboard, there is a "Download Effected Area for field scouting" button. The right side of the dashboard features a satellite map of a farm with a grid overlay. The map includes a "Map Index" label, a "Map" button, and a "Satellite" button. The map also shows a "Geometry Layer 1" toggle, a "Polygon drawing" button, and an "Exit" button. The map is powered by Google, as indicated by the "Google" logo at the bottom left. At the bottom right of the map, there is a scale bar showing "20 m" and a "Keyboard shortcuts" link. The bottom right corner of the dashboard also contains links for "Imagery ©2023, CNES / Airbus, Maxar Technologies", "Terms of Use", and "Report a map error".



Monitoring dashboard expended view

LIMS Crop Monitoring Dashboard

742QuaidabadBandialShu

Start Date:

2020-01-01

End Date:

2023-08-31



LIMS Crop Monitoring Dashboard

742QuaidabadBandialShu

Start Date:

2020-01-01

End Date:

2023-08-31

Dispaly Indices:

Sentinel Dates

Indices:

Map Index

Zoning

Indice Values:

Click on map to get Selected Indice Value

Download Indice Image:

Download Effected Area for field scouting

Dispaly Indices:

2023-08-18

2023-08-21

2023-08-21

2023-08-21

2023-08-21

2023-08-23

2023-08-28

2023-08-28

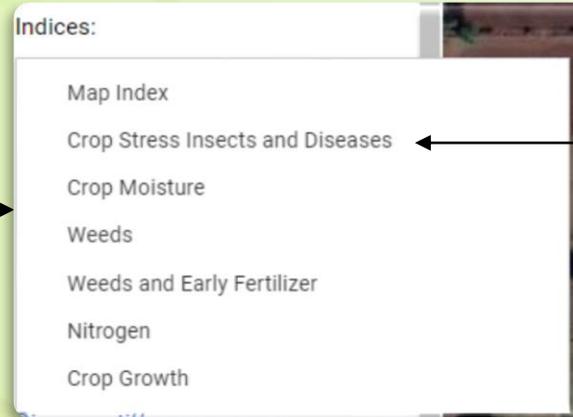
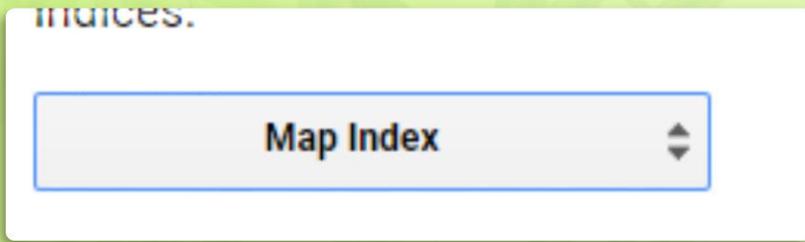
2023-08-28

2023-08-28

2023-08-28

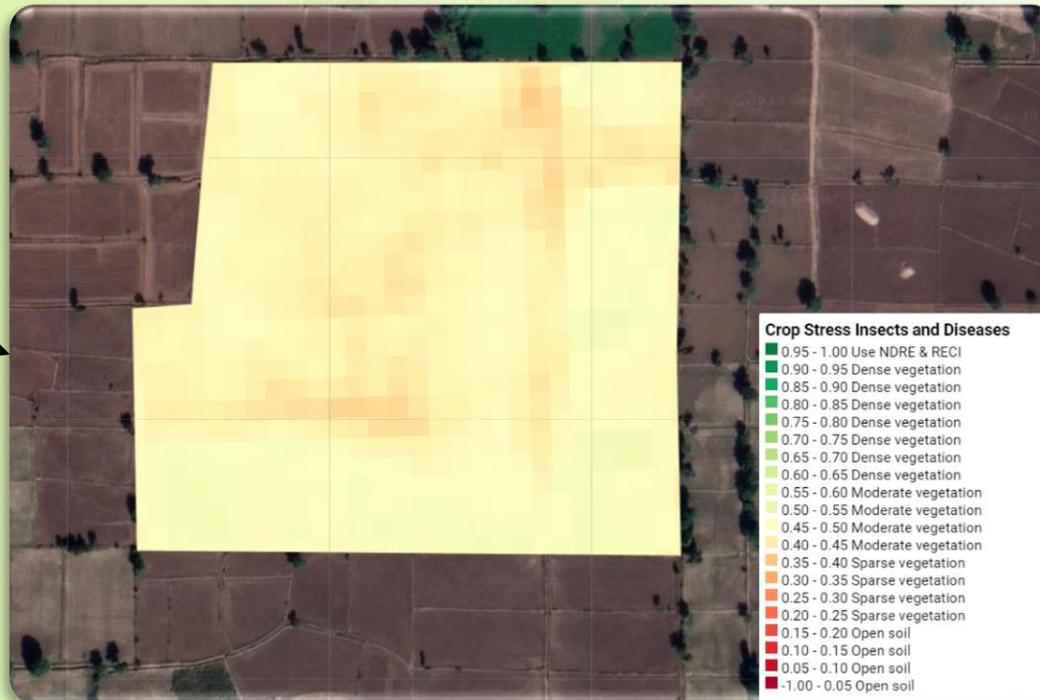


Monitoring dashboard Indices



Now select Map index from indices, a list will appear, select **Crop Stress Insect and Diseases**. User can check other indices too.

Map will start to load layers data on screen. Wait for complete upload of layer and monitor based on values mentioned on the right side of layer



Monitoring dashboard Zones

Zoning

Zoning
Crop Stress Insects and Diseases
Crop Moisture
Weeds
Weeds and Early Fertilizer
Nitrogen
Crop Growth

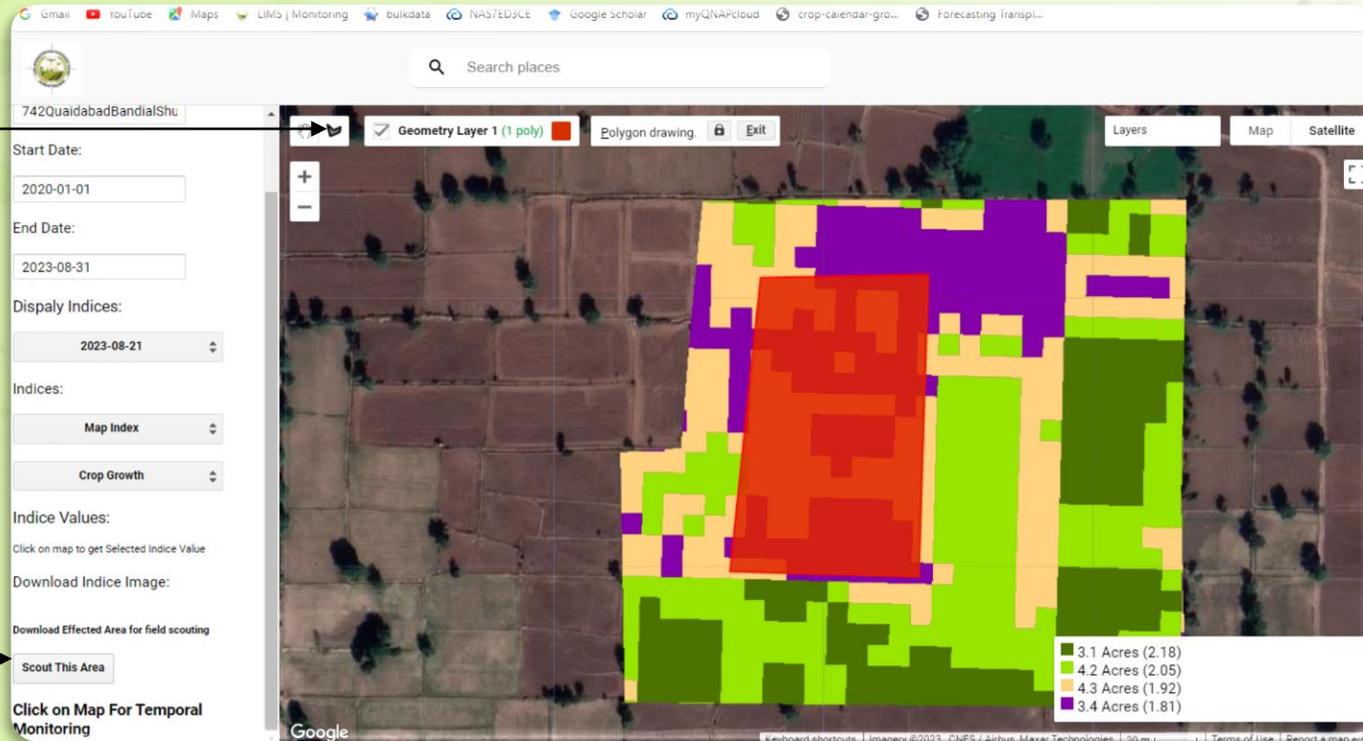
Now select Map Zones from zones, a list will appear, select **Crop Stress Insect and Diseases**. User can check other indices too.

Map will start to load layers data on screen. Wait for complete upload of layer and monitor based on values mentioned on the right side of layer



Monitoring dashboard Scouting

Draw polygon using polygon tool



After drawing press, scout this area button, it will download the **KML** file for the user

On the basis of data monitored from **Crop Stress Insect and Diseases, Crop Moisture, Nitrogen and Crop Growth** from zoning, make polygons for effected areas that should be checked and treated for any stress including water, fertilizer or insect pest attack

