

WELCOME  
TO



ARABLE

WEB ONBOARDING GUIDE  
AUGUST 2022





# SITES: A Field-Based Approach to Visualizing Your Data

## TRANSITION TO SITES

When your account is transitioned to Sites, you will see a “Welcome to Sites” message when you log in.

**Welcome To Sites**

You are now viewing your data through the lens of a physical site (field or block) instead of an individual Mark deployment location.

Sites have been created for all the operational locations you had. This includes any existing seasons as well.

At this time, it is still recommended to verify that sites, seasons and alerts are configured as you would have expected.

Tools for combining multiple Marks into one site and drawing exact site boundaries are available in the new Sites page accessible from the main navigation bar.

**Any new deployment will be found here on the Map page under the Unassigned Devices tab.**

A widget will guide you through assigning the new deployments to a site as well as to validate connected sensors and drawing exact field boundaries.

Note that after creating a site, it may take up to 3 minutes for data to show up.

[Close](#)

Current Sites		Unassigned Devices	
Site Name	Temp	Rain	W/m <sup>2</sup>
12Mary-test	58°F	0"	1
23Mary-test	58°F	0"	1
Anand's Device	55°F	0"	1
Berg Enclave site	54°F	0"	1
Berg's Enclave Site	68°F	0"	1
Blackberry Top	57°F	0"	1
Borrasca Area	75°F	0"	1
Bryan Jensen Front Yar...	61°F	0"	1
Caylor Home edit	32°F	0"	1
Central Valley	54°F	0"	2
Cypress Corner	55°F	0"	1
Fence Line	55°F	0"	1
Hardy Homestead site	67°F	0"	1





# SITES: A Field-Based Approach to Visualizing Your Data

## MAP VIEW

You'll notice that the Web landing page, [Map](#), has changed to a Sites-specific view. Your currently-deployed devices will appear in the **Current Sites** tab with the Site Name as the original name of the device location.

The screenshot shows the Arable web interface in 'Map View'. The interface includes a sidebar with navigation options like Map, Satellite, Analysis, Sites, Alerts, Settings, and Search. The main area displays a satellite map of the United States and Mexico. A yellow pin is visible on Mexico City. A table on the right shows a list of 'Current Sites' with columns for Site Name, Temp, Rain, and W/m². An orange arrow points to the 'Current Sites' tab.

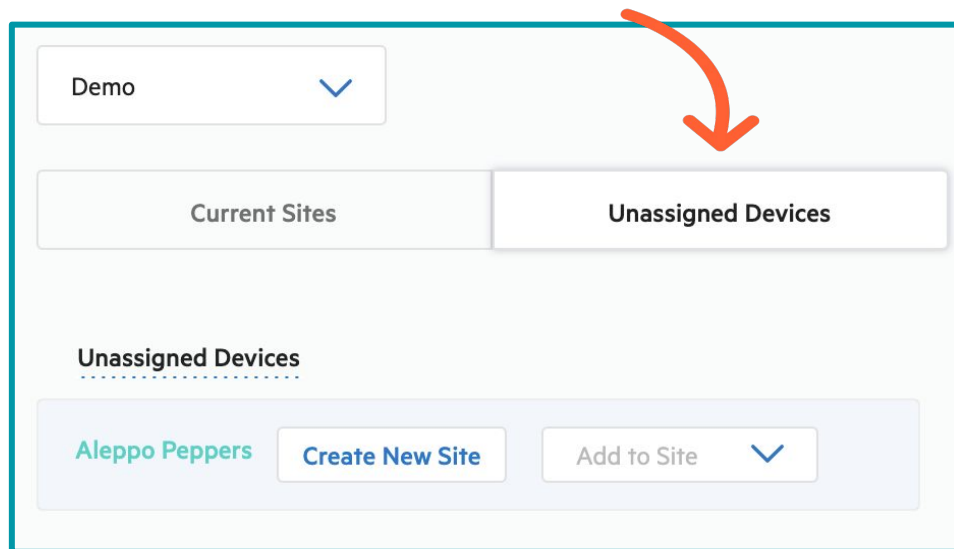
Site Name	Temp	Rain	W/m <sup>2</sup>	
12Mary-test	57°F	0"	1	4 mins ago
23Mary-test	57°F	0"	1	4 mins ago
Anand's Device	54°F	0"	1	5 mins ago
Berg Enclave site	54°F	0"	1	42 mins ago
Berg's Enclave Site	68°F	0"	1	42 mins ago
Blackberry Top	57°F	0"	1	22 mins ago
Borrasca Area	75°F	0"	1	34 mins ago
Bryan Jensen Front Yar...	61°F	0"	1	25 mins ago
Caylor Home edit	32°F	0"	1	38 mins ago
Central Valley	54°F	0"	2	20 mins ago
Cypress Corner	55°F	0"	1	22 mins ago
Fence Line	55°F	0"	1	20 mins ago
Hardy Homestead site	67°F	0"	1	45 mins ago



# SITES: A Field-Based Approach to Visualizing Your Data

## NEW DEPLOYMENTS

Future deployments will appear under the **Unassigned Devices** tab on the **Map** screen. If you would like to tie the new deployment to an existing site, select that site's name under "Add to Site." If you would like to create a new site for this device, select "Create New Site."





## Map View Toggle Button, Org Dropdown & Team Dropdown

You can switch the **view** of Map. And, also can switch to **another org or teams** you are part of. Also, the org and team selected from dropdown will act as **globally** on the app.

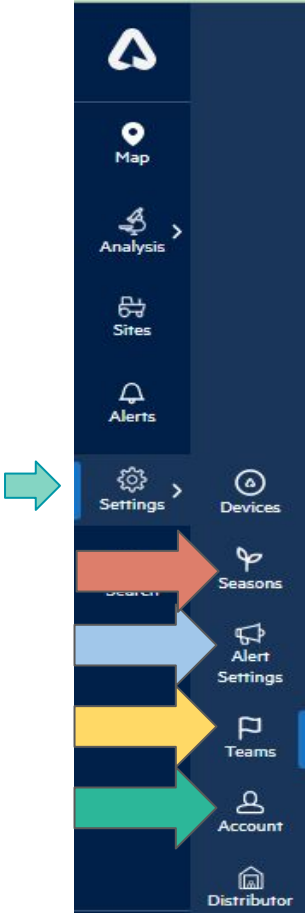
The screenshot displays the Arable app interface. At the top, there are dropdown menus for 'Organization' (set to 'arable-team') and 'Team' (set to 'All Teams'). A 'Temperature' dropdown is also visible. Below these are 'Map' and 'Satellite' view toggle buttons. A red box highlights the 'Map & Satellite View Toggle button'. The main area is a world map with several data points: 61° (grey), 62° (blue), 34° (blue), and 74° (yellow). A temperature scale at the bottom ranges from -10 to 140 °F. On the right, a table shows 'Current Sites' and 'Unassigned Devices'.

Site Name	Temp	Rain	W/m <sup>2</sup>	
1.2Mary-test	56°F	0"	1	29 mins ago
2.1Mary-test	56°F	0"	1	29 mins ago
Anand's Device	54°F	0"	1	6 mins ago
Berg Enclave site	56°F	0"	116	28 mins ago
Blackberry Top	55°F	0"	1	9 mins ago
Borrasca Area	74°F	0"	1	18 mins ago
Bryan Jensen Front Yar...	62°F	0"	1	11 mins ago
Caylor Home edit	32°F	0"	1	25 mins ago



## NAVIGATION: The First 4 Essentials

When devices ship, the **Org Admin** will receive an email with account details, including how to log in from the web, and how to download the mobile app. When you deploy your device and log into the web app (<https://app.arable.com>), you will land on the **Map** screen. The deployed device will populate the **Map** as “New” and will need a name for the location. If you are invited to the account by an **Org Admin**, you will land on the **Teams** page first. Let’s get started with these four key pages:



**1. Account & Devices**

**3. Seasons**

**2. Teams**

**4. Alerts & Settings**

# YOU ARE HERE: Arable Overview

The screenshot displays the Arable dashboard interface. On the left is a dark sidebar with navigation icons for Map, Analysis, Sites, Alerts, Settings, Devices, Seasons, Alert Settings, Teams, Account, and Distributor. The main content area is divided into three sections:

- Organization List:** A dropdown menu showing 'arable-team' selected, with a search bar and a list of organizations including 'arable-team', 'qateam', 'TestMadhurOrg', and 'Viditha'. An orange callout box labeled 'Org List' points to this menu.
- Team List:** A dropdown menu showing 'All Teams' selected, with a list of teams including 'All Teams', '1TDemo', and 'Adam Smith'. An orange callout box labeled 'Team List' points to this menu.
- Map:** A world map showing temperature markers in various locations: 19°, 22°, 26°, 24°, 20°, and 23°. An orange arrow points from the bottom left towards the map.

At the bottom of the map is a temperature scale in degrees Celsius, ranging from -23 to 60. The right side of the dashboard features a weather data table with columns for Location, Temp, Rain, W/m², and a timestamp. The table lists various locations and their corresponding weather data.

Location	Temp	Rain	W/m²	Timestamp
Bayer Smallholders Tra...	15°C	0mm	1	14 mins ago
Berg Enclave	20°C	9.9mm	1	18 mins ago
Borrasca	23°C	0mm	1	18 mins ago
Bryan Jensen Front Yard	16°C	0mm	1	3 mins ago
C005449   2022-07-20 1...	22°C	0mm	1	43 mins ago
C006309   2022-06-17 ...	31°C	0mm	1	28 mins ago
C006692   2022-06-16 1...	--	0mm	--	Jul 30
C006753   2022-07-29 1...	--	--	--	Few sec ago
C009024   2021-09-22 ...	15°C	0mm	1	Few sec ago

At the bottom of the dashboard, there is a footer with the URL <https://app.arable.com/dashboard/locations/devices>, keyboard shortcuts, imagery copyright information (©2022 NASA, TerraMetrics), and terms of use. A Windows watermark is visible in the bottom right corner.

# ACCOUNT: Settings & Notifications

**Name \***  
First & Last

**Email Address**  
Email Address

**Username \***  
Usernames must be all lowercase and cannot be longer than 20 characters.

**Phone Number**  
e.g. +1 999 999 9999

**API Key**  
Generate or refresh

**Current Password**

**New Password**

**Confirm Password**

**Units**  
Select your measurement units.

Size	<input type="button" value="Inches"/>	or	<input type="button" value="Millimeters"/>		
Temperature	<input type="button" value="Fahrenheit"/>	or	<input type="button" value="Celsius"/>		
Pressure	<input type="button" value="Millibars"/>	or	<input type="button" value="Kilopascals"/>		
Volume	<input type="button" value="Gallons"/>	or	<input type="button" value="Liters"/>		
Speed	<input type="button" value="Miles per hour"/>	or	<input type="button" value="Kilometer per hour"/>	or	<input type="button" value="Meter per second"/>

**Agreements & Policies**  
Latest versions

[Terms of Service](#)  
[Privacy Statement](#)

First, head over to **Account**. On this page, you should change your password, plus find a copy of the **Terms of Service** (covering Warranty and Replacement) and the **Arable Data Privacy Statement**. You can also generate API Keys and ensure that you have access to the right account.

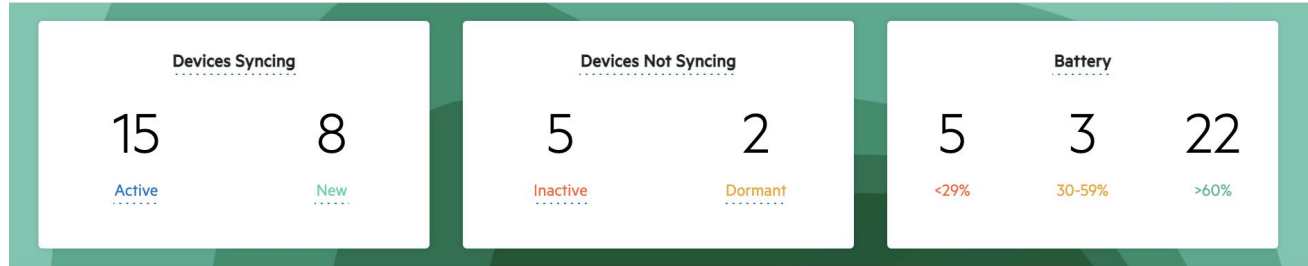
Here you will also add your mobile phone number to receive SMS- and phone- based alerts (in addition to push notifications), find the **Data Privacy Agreement**, **API Key**, and change **Unit Preferences**.

To get started with the API, visit <https://developer.arable.com/>



## DEVICES: SETTINGS

The **Devices** page is meant to help you manage the status of each of your devices and monitor connected sensors.



### Devices Syncing: Active

Named devices that are posting measurements to our servers at least once every 8.5 hours.

### Devices Syncing: New

Devices from the factory will show up as Untitled upon first deployment. Once given a sitename the status is updated to Active.

### Inactive

Deployed devices experiencing a field problem. Main causes are battery <15% or the device has not posted measurements to our servers for 8.5 hours.

### Dormant

Devices that have sent an undeployment message to the Arable system and are no longer collecting data.

### Battery

Grouped by low, medium, and high percentage. Under 30% is in danger of losing power, and may need to be plugged into a power source to charge, then moved to a permanent location with more direct sunshine. Medium should be monitored for future dips in charge. High is fine, no action required.

# Devices Details

Organization: Bayer Breeding | Team: All Teams

### Devices Syncing

789 Active | 333 New

### Devices Not Syncing

7 Inactive | 2 Dormant

### Battery

61 <29% | 24 30-59% | 1243 >60%

Device ID	GPS	Sites	Model	Battery	Connectivity	Last Sync	Status	Connected Sensors
C010561			Mark 2	94%	Very Good	1 min ago	Active	Validate
C011002		C011002   2022-04-20 15:32:18 C011002 Spencer Corn	Mark 2	100%	Very Good	1 min ago	Active	Validate
C012354		Untitled Location	Mark 2	95%	Very Good	1 min ago	Active	None Found
C006374		Bellmont ILBB site - 2 C006374   2021-09-12 17:03:07 C006374   2021-09-13 11:31:36 C006374   Harrisburg, IL C010219   2022-03-29 19:30:38	Mark 2	100%	Very Good	1 min ago	Active	Validate
C011053			Mark 2	99%	Very Good	Aug 25	Active	None Found

We can Validate the sensor's, while clicking on 'Validate' button.

# Set Up Connected Sensors Model

**Set Up Connected Sensors**

Please confirm the following sensors are plugged into the Mark.

**Port 1 Analog**

- Davis Wind Anemometer 6410 (Direction) ✓ 1
- Davis Wind Anemometer 6410 (Direction)
- GEMS PS41 Series Pressure Switch

*Specifically, for deployments in the Southern Hemisphere, it is recommended that the arm of the anemometer is pointed South and that a value of 180° is entered as offset.*

**Port 2 Pulse**

- Davis Wind Anemometer 6410 (Speed) ✓

**Port 3 SDI-12**

- Sentek Drill and Drop Soil Moisture Probe ✓

Cancel Confirm

**Background Dashboard:**

- Organization: Bayer Breeding
- Team: All Teams
- Value: 789 (Active)
- Table Headers: #, Device ID, GPS, Sites
- Table Rows:
  - 1 | C010561 | [GPS Icon]
  - 2 | C011002 | C011002 | 2022-0 | C011002 Spencer
  - 3 | C012354 | [GPS Icon] | Untitled Location
  - 4 | C006374 | [GPS Icon] | Belmont ILBB site C006374 | 2021-0 | C006374 | 2021-0 | C006374 | Harris C010219 | 2022-0
  - 5 | C011053 | [GPS Icon]
  - 6 | C006454 | [GPS Icon]



# Set Up Connected Sensors - NEW DEPLOYMENTS

We can Validate the sensor's, while clicking on '**Validate**' button and Before selecting port 2, the user should select 'Port 1 Analog' sensors or an error message will appear.

The screenshot displays the 'Set Up Connected Sensors' dialog box over the Arable dashboard. The dialog box contains the following information:

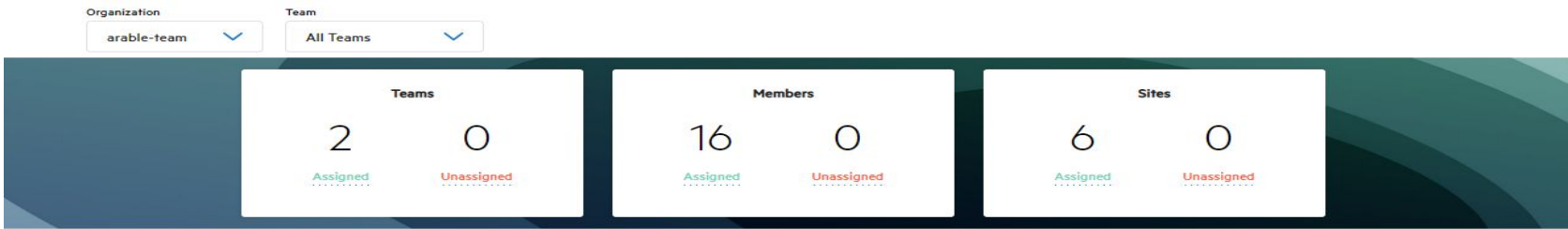
- Title:** Set Up Connected Sensors
- Message:** Please confirm the following sensors are plugged into the Mark.
- Port 1 Analog:** A dropdown menu is open, showing the text 'Please select Wind Direction or Pressure Switch to continue' in red. This dropdown is highlighted with a red border.
- Port 2 Pulse:** A text input field contains 'Davis Wind Anemometer 6410 (Speed)' with a green checkmark to its right.
- Port 3 SDI-12:** A text input field contains 'Sentek Drill and Drop Soil Moisture Probe' with a green checkmark to its right.
- Buttons:** 'Cancel' and 'Confirm' buttons are located at the bottom of the dialog.

The background dashboard shows a table of devices with columns for Device ID, GPS, and Sites. A 'Validate' button is visible for each sensor configuration in the 'Connected Sensors' section.



# TEAMS: Overview

Next, to get everything set up, navigate to the **Teams** page. This will allow you to set up your team, add additional users, change account permissions, and ensure that you have the right level of access to account information.



Team Name	Members	Sites	
Administrators	(8) Total		<a href="#">View Team</a>
TTest	(12) Total	(3) Total	<a href="#">View Team</a>
arable	(8) Total	(3) Total	<a href="#">View Team</a>

- Home
- Map
- Analysis
- Sites
- Alerts
- Settings
- Search
- Devices
- Seasons
- Alert Settings
- Teams**
- Account
- Distributor



We've designed the Arable platform to be flexible enough to serve users with different needs, from granular operations to large-scale data collection across multiple geographies. On the **Teams** page, the Org Admin will be able to see all the teams, devices and members associated with the account. Teams tie together users with devices. Within each team, members will have access to the subset of devices associated with that team. Please check this page and make sure you have access to the right teams and right subset of devices/locations.



## TEAMS: Members & Permissions

Select “View Team” to see any of the members associated with each team. You will be able to see members, their email address, and their level of access. At Arable, we take data privacy very seriously. To make it easy for you to manage permissions, we have four levels of access: **Org Admin**, **Org Reader**, **Team Admin** and **Members**.

▼ Team Name      ▼ Members

**Administrators**

(5) Org. Admin (2) Org. Reader

### Team Members Information

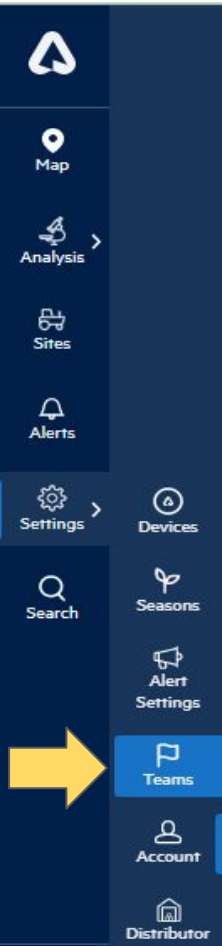
Name	Email		Role
Adam Wolf	adam@arable.com	Org. Reader	Org. Admin
Loreli Carranza	loreli@arable.com		Org. Admin
Vanessa Handley	vhandley@berkeley.edu		Org. Reader

**Org Admin** will be able to see all the devices associated with the account, can add members to any team and create new teams.

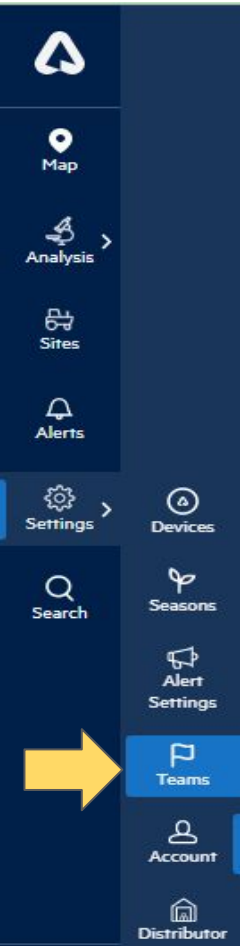
**Org Reader** can see all the devices, but cannot move members, teams and devices.

**Team Admins** can invite new members to their teams.

**Members** can view & edit device, team and member data for only their team, and cannot invite new team members.



# TEAMS: Inviting Members & Creating New Teams



### Invite Member to Organization

Current      New

**Select Member**

Select Member

**Select Role**

Select Role

**Select Team(s)**

Select Team(s)      Add

**Teams & Roles**

Please select a member, assign a role and select a team or teams from the drop down above and click "add".

Cancel      Confirm

Unlimited users can join the Arable platform. Click on "Invite Member" to add new members (New) and to move existing members to new teams (Current).

### Create New Team

**Team Name**

Type the team's name

**Add or Remove Members**

Type Name or Email Address and press Enter

**Add or Remove Devices or Locations**

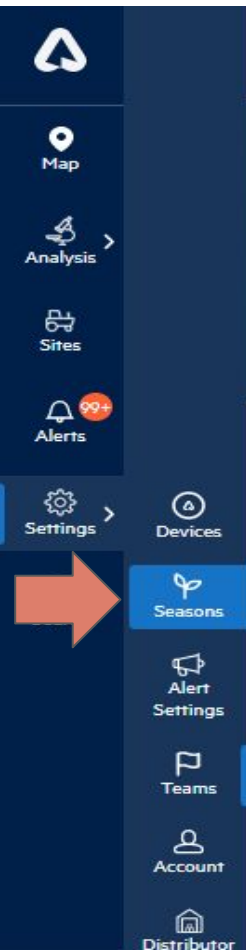
Type Device ID or Location Name and press Enter

Cancel      Confirm

By clicking "Create New Team" you can organize a new set of users and subset of devices/sites. If you need help adding members or teams, please get in touch with [support@arable.com](mailto:support@arable.com).



## SEASONS: Overview



Then, navigate to **Seasons** to add details about the crop at your site. We have variety-specific growth stages that will allow for growth-stage based alerting. It will also enable seasonal archives for year-over-year comparisons.

Even if a device is not deployed at a site at the start of the season, setting up a season retroactively will enable us to backfill with remotely sensed data to provide a better snapshot of the season as a whole.

We built Arable to understand interactions between the climate and crop productivity. To maximize the benefits of the system, we encourage users to add in their seasons and track growth stages.

By inputting seasonal start dates, harvest dates and growth stages, we can combine measurements to allow users to monitor water availability during critical stages, or if different fields are maturing faster.

We have pre-populated the system with a standard list of varieties and growth stages, but can easily add custom varieties, temperature thresholds and growth stages for you if you let us know.

### Create New Season

Please select a location and assign it a crop type and varietal.  
Once your new season has been created you will need to add growing dates and growth stages

**Location**

**Crop Type**

**Varietal**

Cancel Confirm

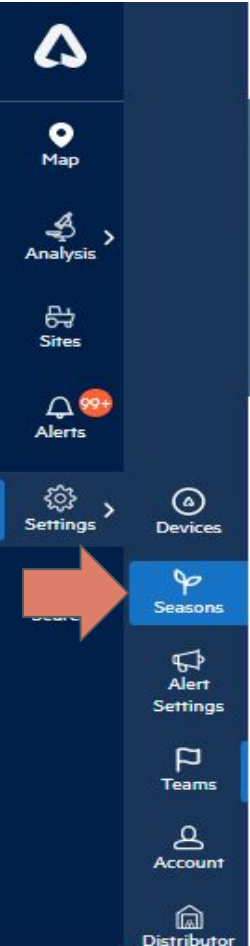




## SEASONS: Entering Growth Stages

If the standard growth stages for a varietal does not match your specific needs or experience, you can easily add or remove growth stages yourself.

Once you enter your varietal and growth stages, it's also easy to apply the same growth stages to multiple devices/Sites. Make sure the season start date is correct, even if it is in the past. Note that the absolute value of cumulative growing degree days will vary based on preferred unit (°C or °F).



**Crop**  
Choose your crop type:

**Varietal**  
Choose your varietal type:

Threshold: Low 6 °C - High 30 °C

**Growing Season**

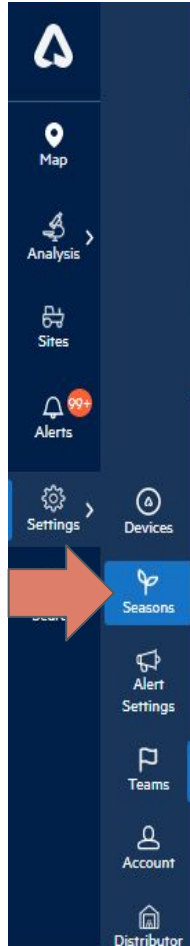
Refill Threshold: --

Start Date	End Date
27-Feb-2022	07-Aug-2022

**Growth Stages**

GDDs (°C)	Growth Stages	
56	S1	⋮
1111	Stg1	⋮

# SEASONS: Understanding the Dashboard



## Sites: Assigned

The number of locations assigned to at least one season in the organization.

## Sites: Unassigned

The number of sites that are unassigned in the selected organization. *To best archive your historical crop data, this number should be zero.*



## Seasons: Current

The number of seasons where today's date is currently within a growing season's start and stop dates.

## Seasons: Completed

The number of seasons with stop dates in the past.

## Seasons: Upcoming

The number of seasons with start dates in the future.



## Growth Stages: Defined

The number of sites with seasons (planting and harvest date defined) that have incremental growth stages enabled, and therefore are able to receive growth stage-based alerts.

## Growth Stages: Undefined

Those without defined growth stages.

## ALERTS: Overview

Now, select **Alerts**. Since you've already added your phone number, crop and season information, it will be easy to select different thresholds for unique locations to make sure you don't miss an event in your field.

The screenshot shows the 'Alerts' configuration page. It is organized into two main sections: 'Weather Alerts' and 'Crop Health Alerts'.  
Under 'Weather Alerts':

- Heat Spikes**: Threshold set to 58 °C.
- Frost Events**: Threshold set to 23 °C.
- Rainfall Events**: Threshold set to 3 in/hr.

Under 'Crop Health Alerts':

- GDD & Growth Stages**
- Device Alerts**
- Device Tilts**: Threshold set to 7.

Each alert category has three icons for notification preferences: a speech bubble (push), a smartphone (SMS), and a telephone handset (phone call).

Only **Org Admins** can change/set the global alert thresholds. There are options to receive alerts on the following parameters:

- **Heat Spikes**
- **Frost Events**
- **Precipitation Rate**
- **Growth Stage / GDD** (new growth stage transition)
- **Device Alerts** (tilt/inactives)

All users can opt in to receive alerts three different ways, and will receive alerts for ALL devices assigned under their permissions:

- **SMS-Based Text Alerts**, enter phone number on Account page.
- **Phone Calls**, enter phone number on Account page.
- **Push Notifications**, via the mobile app.

## ALERTS: Site-Specific (1 of 2)

The alerts system defaults to global alert, setting the same thresholds across devices/locations.

By clicking “Add Alerts for Specific Site,” **Org Admins** will be able to set own thresholds for specific devices/locations. Similarly, any user can customize the method for receiving alerts with the same mechanism.

### Notifications Settings Created for a Specific Location

Your new specific notification settings have been created for **Untitled Location**. You can now set specific parameters and notification channels for this location.

Close

### Add Notifications Settings for a Specific Location

Please choose the location you would like to add specific notification settings

Name | Date

Device ID C005196 Deployment Date November 21, 2020	Device ID C005310 Deployment Date January 5, 2021	Device ID C004681 Deployment Date January 2, 2021	Device ID C004798 Deployment Date September 25, 2020	Device ID C005391 Deployment Date October 24, 2020
Hardy Homestead Device ID C005430 Deployment Date October 28, 2020	Lupine Lane Device ID C004527 Deployment Date December 13, 2020	Mount Tamalpais Device ID C003985 Deployment Date July 7, 2020	Neelys Device ID C005135 Deployment Date November 30, 2020	RD Backyard Device ID C004863 Deployment Date December 3, 2020
NEW Untitled Location Device ID C005137 Deployment Date November 15, 2020				

Cancel

Confirm



## ALERTS: Site-Specific (2 of 2)

Home  
Map  
Analysis  
Sites  
Alerts  
Settings  
Devices  
Search  
Seasons  
Alert Settings  
Teams  
Account  
Distributor

For each location, the alert settings will mirror the global settings as the default setting. Once a specific location is selected, it will appear below the global settings (as shown for **Weather Alerts** on the right). Initially, both the **Parameters** and **Channels** boxes will be checked, indicating that that location will mirror the global settings by default.

To set location-specific alerts, uncheck the **Parameters** and **Channels** boxes. This will allow the user to change the thresholds and select different methods for receiving the alerts.

By rechecking the **Parameters** and **Channels** boxes, the user overrides the local settings and reverts to the default global settings.

**Weather Alerts**

Heat Spikes 96 °F

Parameters  Channels

**Crop Health Alerts**

GDD & Growth Stages

Parameters  Channels

### Untitled Location

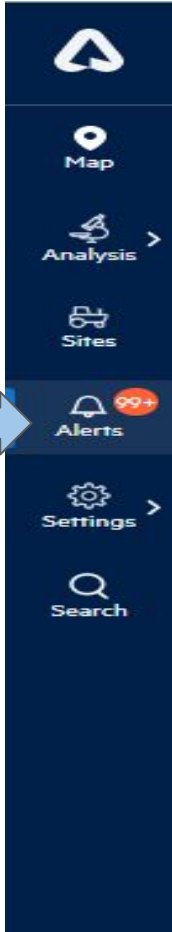
**Weather Alerts**

Heat Spikes 93 °F

Parameters  Channels

Make Same as Default:  Parameters  Channels

# ALERTS: Overview



The **Alerts** page is an easy way to check on current and historical alerts across devices/sites in your organization. Alerts on device location (movement > 200 meters), crop health and growth stage, weather threshold alerts and device and account activity will be logged here.

Alerts can be sorted by type:

- **Date** (chronological)
- **Weather**
- **Crop Health**
- **Device**
- **Account**
- **Unread**

To get additional detail on each alert, click the “+” next to it.

Here, there will be a quick link to change alert settings. Previously read alerts will show as gray.

Date	Detail	Date	
Frost Alert Weather	The temperature is below 23 C at madhur.	02:34 PM	+
Frost Alert Weather	The temperature is below 23 C at Madhur_123.	02:34 PM	+

Date

Account

Crop Health

Date

Device

Unread

Weather

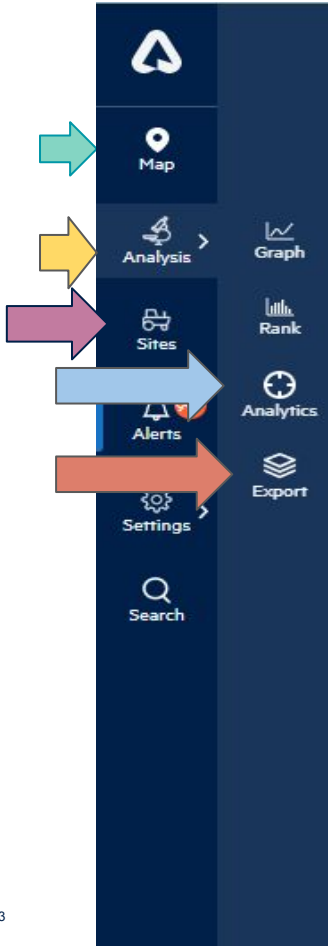
**Type:** Frost Alert  
**Category:** Weather  
**Detail:**  
01/18/2021 04:34 AM  
The temperature is below 36 F at PAM-garden M2.

Change subscription settings: [Account Settings](#)



## EXPLORE THE WEB APP: Getting the Most Out of Arable

Once you have the basics set up, you can begin to explore more functionality in the app.



**5. Map & Details**

**7. Export**

**6. Graph & Rank**

**8. Analytics**

**9. Sites**

# MAP: Overview

Organization: arable-team | Team: All Teams | Temperature: [dropdown]

Map | Satellite | Show satellite imagery

**Toggle Button**

**Measurement Scale**

Now | Tomorrow's Forecast

Site Name	Temp	Rain	W/m <sup>2</sup>	
Demo field	12°C	0mm	1	17 mins ago
Demo site 1	9°C	0mm	1	17 mins ago

**Click any site for details**



# Sites : Overview

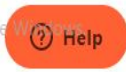
Organization: Bayer Breeding | Team: All Teams

+ Create New Site

Site ID	Crop	Growth Stage	Device ID	Deployment	Battery
1TA - CDB1	Agrigold Soybean - Yield Masters Sampling Protocol	No Growth Stage Defined	C010824	1TA - CDB1	100%
1TA - FLA1	Agrigold Soybean - Yield Masters Sampling Protocol	No Growth Stage Defined	C010751	1TA - FLA1	100%
1TA - FRP1	No Crop Specified	No Growth Stage Defined	C010844	1TA - FRP1	100%
1TA - ISO1 / ISO2					
1TA - LBA1 / LBA2					
1TA - LCA3 / LCA4					

The first Org in the dropdown should be the default org shown in the Sites page and as per **Org** selected, the **Site** should be displayed.

Site page should have the button 'Create New Site', where we can create the new site.



# Set Up Connected Sensors - NEW DEPLOYMENTS

We can Validate the sensor's, while clicking on **'Validate'** button and Before selecting port 2, the user should select 'Port 1 Analog' sensors or an error message will appear.

**Set Up Connected Sensors**

Please confirm the following sensors are plugged into the Mark.

Port 1 Analog

Please select Wind Direction or Pressure Switch to continue

Port 2 Pulse

Davis Wind Anemometer 6410 (Speed)

Port 3 SDI-12

Sentek Drill and Drop Soil Moisture Probe

Cancel Confirm

#	Device ID	GPS	Sites	Status	Connected Sensors
1	C010561	+		Active	Validate
2	C011002	+	C011002   2022-04 C011002 Spencer	Active	Validate
3	C012354	+	Untitled Location	Active	None Found
4	C006374	+	Bellmont ILBB site C006374   2021-09 C006374   2021-09 C006374   Harriab C010219   2022-03	Active	Validate
5	C011053	+		Active	Validate
6	C006664	+		Active	Validate

Activate Windows  
Go to Settings to activate Windows.

Help

ARABLE

<https://app.dev.arable.com/dashboard/settings/devices>

## SITE DETAILS: Overview

Organization: arable-team    Team: All Teams

### 1.4New Test Site

Bucks County, Pennsylvania, United States    (3) Marks

Google Imagery ©2022 Maxar Technologies, U.S. Geological Survey, USDA/FPAC/GEO

40.26618, -74.93062

#### Site's Device List

Local Site Time: 5:26 am

Device ID	Deployment Name	Battery Status	Connected Sensors
C004730	Berg's Enclave	Unknown	None

On the map, click a Site's name from the list on the right to be taken to that Site's complete details page. A **Site** is a named Mark device; if you need to name your new device, this is where you do it.

All of the device's information can be found on the right side of this page, including the Sitename, device ID, GPS Site, battery percentage, time of last sync, and any connected external sensors such as soil probes or anemometers.

Here you can add tags (e.g., alfalfa, strawberries, greenhouse) to the Site; these tags can searched and referenced via the **Search** page.

Top right are quick links to the **Export** and **Graph** pages.

In the following slides we'll explore the **Weather**, **Water**, & **Plant** tabs. Click on any of the words underlined in blue (e.g., **Current Conditions**) to see detailed descriptions of the measurements and other helpful information.

## SITE DETAILS: Weather Tab (1 of 2)

The screenshot displays the ARABLE interface for the Weather tab. The left sidebar includes icons for Home, Map, Analysis, Sites, Alerts, Settings, and Search. The main content area features tabs for Weather, Plant, and Notes. The Weather tab is selected, showing two main sections: 'Current Conditions' and 'Today's Temperature'. The 'Current Conditions' section displays four metrics with progress bars: Temperature (-9 °C), Humidity (87%), Pressure (102.9 kPa), and Solar Radiation (107 W/m²). The 'Today's Temperature' section shows a 'Freezing and Dry' status, with a low of -11 °C and a high of -6 °C. Below this, it indicates 'Forecasted Precipitation Next 24 Hours' as 0mm. An orange arrow points from the Weather tab in the sidebar to the Weather tab in the main content area. A green arrow points from the Sites icon in the sidebar to the left edge of the page.

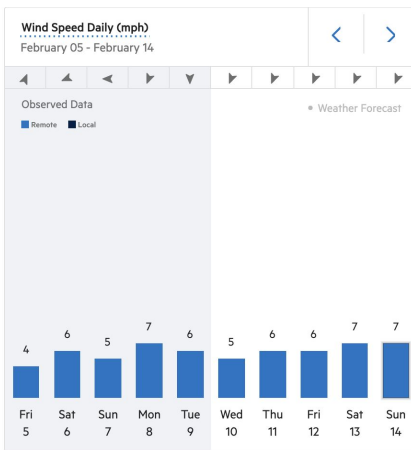
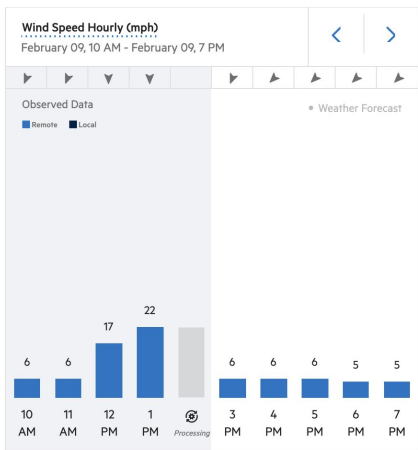
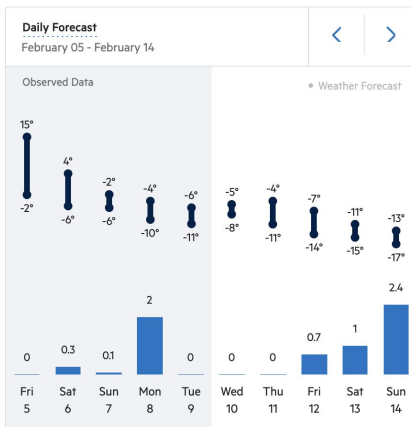
Current Conditions	
Temperature	-9 °C
Humidity	87 %
Pressure	102.9 kPa
Solar Radiation	107 W/m <sup>2</sup>

Today's Temperature	
Freezing and Dry	
Low	High
-11 °C	-6 °C
Forecasted Precipitation Next 24 Hours	
0mm	

Detailed weather measurements can be found on this tab. **Current Conditions** shows climate conditions for the selected location, like humidity and solar radiation. **Today's Temperature** shows a low and high temperature for the day, as well as expected rainfall.



## SITE DETAILS: Weather Tab (2 of 2)



The graphs at the bottom show **Hourly & Daily Rainfall** and **Hourly & Daily Wind Speed**. Without an attached anemometer, we will show remotely sensed wind.

Both observed (grayed, to the left) and forecasted (white, to the right) data are shown for the day selected. You can scroll to the left or right to see past and forecasted values. For hourly, we show 48 hours' observed data and 48 hours' forecast. For daily, we show 14 days' observed and 10 days' forecast data.

Use the blue < > arrows at the top of each graph to change the time/date.

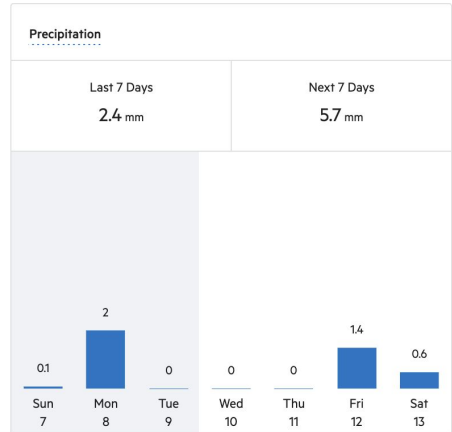
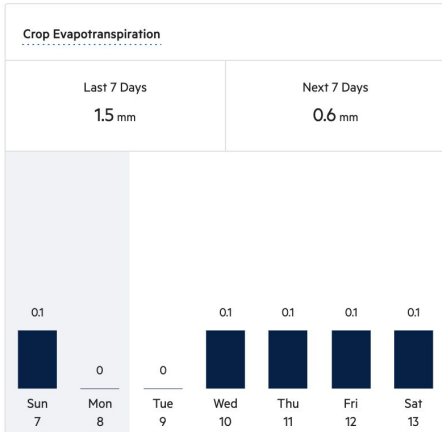
# SITE DETAILS: Plant Tab (1 of 2)

- Home
- Map
- Analysis
- Sites
- Alerts
- Settings
- Search

Weather **Plant** Notes

Export Graph

Irrigation Overview								06 Feb 2021	12 Feb 2021	<	>
Type	Sat 6	Sun 7	Mon 8	Tue 9	Wed 10	Thur 11	Fri 12	Weekly Insights			
ETc	0.1 mm	0.1 mm	0 mm	0 mm	0.1 mm	0.1 mm	0.1 mm	0.5 mm Total			
Precipitation	0.3 mm	0.1 mm	2 mm	0 mm	0 mm	0 mm	1.4 mm	3.8 mm Total			



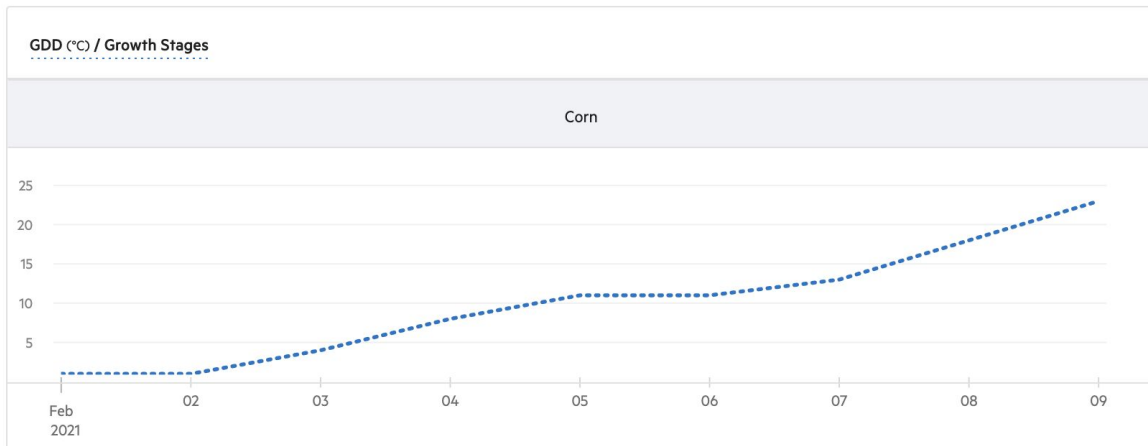
The **Plant** tab shows a Sites plant measurements, a critical component to understanding crop outcomes.

The **Irrigation Overview** provides a daily summary of both **Evapotranspiration** and **Precipitation**.

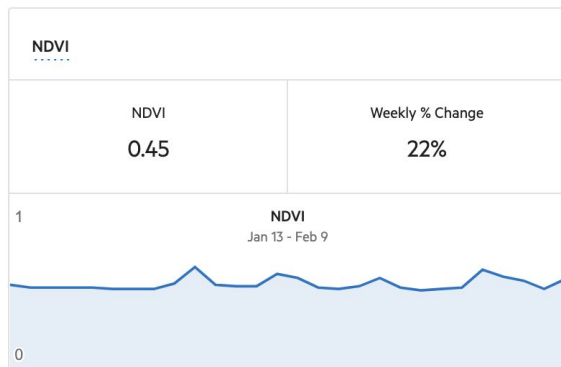
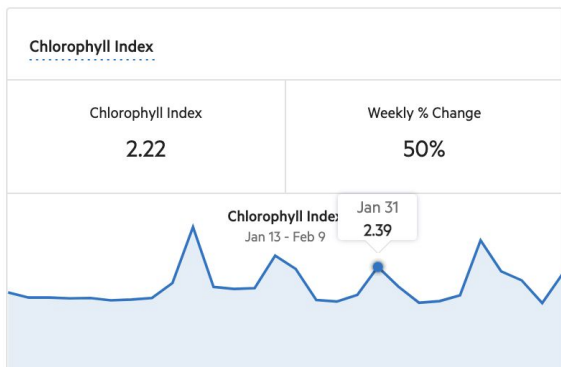
These two measurements are also shown below, with observed and forecasted accumulations.



## SITE DETAILS: Plant Tab (2 of 2)



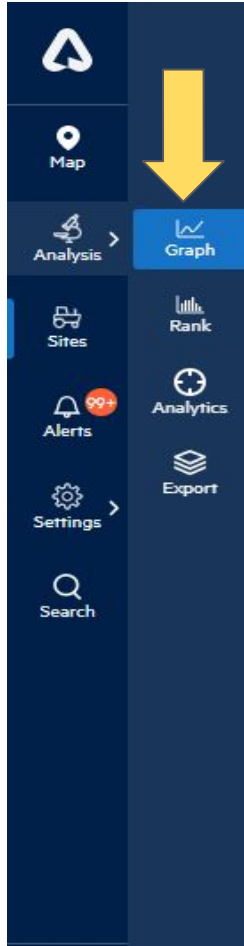
If a season has been defined for the location (set on the Seasons page), **Cumulative Growing Degree Days** and **Crop Growth Stages** will be displayed on this page.



**Chlorophyll Index** and **NDVI** are also shown on this page in absolute value and weekly percent change.

Hover your cursor over the graph to see daily values.

# GRAPH: Overview



Select **Graph** from the left-hand menu to visit this page. Here you can combine weather and plant data at one or several Site, all in one view.

In the **Time** view, pick your Site(s), measurement(s), and date range (e.g., last 30 days) before clicking Graph to view your data.

Most measurements have an hourly option and allow the use of a slider at the bottom to focus in on specific time events.

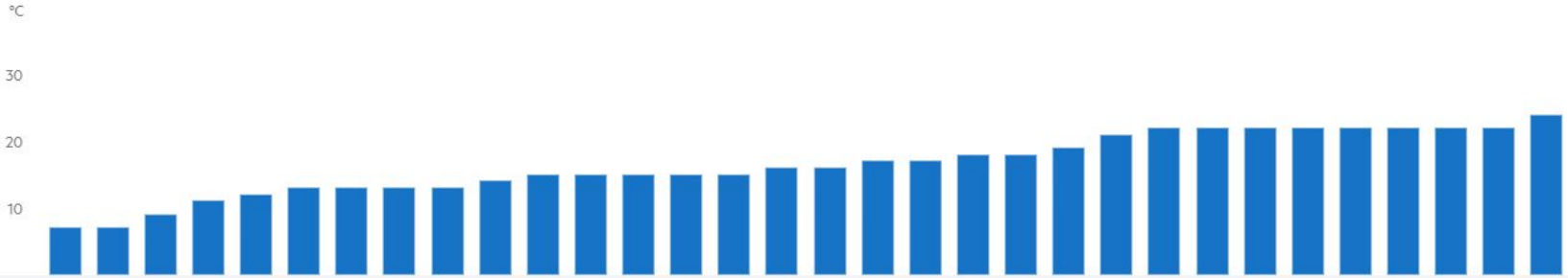


# RANK: Overview

Organization: arable-team Team: All Teams

Sort By: Temperature Low High

< View More >



Rank	Site Name	GDD Start Date	GDD Stop Date	Last Sync	Temperature
1	Neighbor's Driveway	--	--	21 mins ago	0 °C
2	Neelys site	--	--	44 mins ago	7 °C
3	Northeast End	--	--	21 mins ago	7 °C

To see how each Site ranks against the others, toggle to **Rank** at the top of the page. Select your preferred measurement (e.g., growing degree days, solar radiation, NDVI, etc.) from the Sort By dropdown to rank your Sites by that measurement.



# EXPORT: Overview

- Home
- Map
- Analysis
- Graph
- Sites
- Rank
- Alerts
- Analytics
- Export
- Settings
- Search

Organization: Absolute Foods  
Team: All Teams

## Export

**Site**  
Enter site name or device ID: 1.test12

**Granularity**  
Select all, hourly, or daily data tables.  
All | Hourly | Daily

**Measurements**  
Will change dependent upon granularity.  
All  
[Download Data Dictionary in PDF](#)

**Date Range**  
From first deployment date to today.  
18-Apr-2022 | 03-Aug-2022

**Units**  
Select your measurement units.  
Inches | Millimeters  
Fahrenheit | Celsius  
Millibars | Kilopascals  
Miles per hour | Kilometers per hour | Meters per second

**Format**  
Select export format.  
CSV

Export

To export raw data, visit the **Export** page and select the site, granularity, date range, and preferred units, then click **Export** to download data as a CSV. The file can be opened with all CSV-compatible platforms, e.g., Excel or Google Sheets.

The export contains summary information at the top (e.g., Date Range and Number of Records) and detailed time-series data below.

Select multiple Sites in the Sites drop-down in order to export data for more than one Site at the same time.

On changing **Teams/ Orgs** from dropdown, the **Sites** dropdown data will also get updated.



## ANALYTICS : Overview

Select **Analytics** from the left-hand menu to access the two dashboards we have recently written about, [Site Deep Dive](#) (single Site) and [Compare Across Sites](#) (multi-Site). Toggle between them here.

On both dashboards, you can select your **Org** and the **Team(s)** you want to graph.

Organization: arable-team  
Team: All Dashboards

Water | Weather | Plant

Controls: Device [ALL] | Location [ALL] | Start Date Sun Mar 01 202... | End Date Wed Mar 31 20...

Compare Across Locations | Location Deep Dive

Compare Across Location Version 1.0.0: Select multiple devices or locations and enter your date range in the control panel. Use Group By on X axis to drill up or down to view different time scales.

There are three tabs we will explore in the next slides, **Water**, **Weather**, and **Plant**.

On the **Controls** panel, you should also select which devices/Site you want to graph, and indicate a start date and end date.

Interested in something specific? To request a specific model or dashboard (or to discuss feasibility for a data ingest/integration project), reach out your partnership manager.



# ANALYTICS : Compare Across Sites, Water Tab

**Compare Across Sites, Water** displays precipitation, ETc accumulation by Site, crop water balance by Site, and average soil moisture at top depth by Site. Top 3 Sites for each measurement are in the right-hand column.

- Arable Logo
- Map
- Analysis > Graph
- Sites > Rank
- Analytics**
- Alerts
- Settings > Export
- Search







# ANALYTICS : Site Deep Dive, Water Tab

**Site Deep Dive, Water** displays ETc plotted with rainfall, crop water balance, top depth of soil moisture with refill point and field capacity lines, and precip as a percent of ETc. Extreme days are shown in the right-hand column.

Organization: AAFC | Team: All Teams

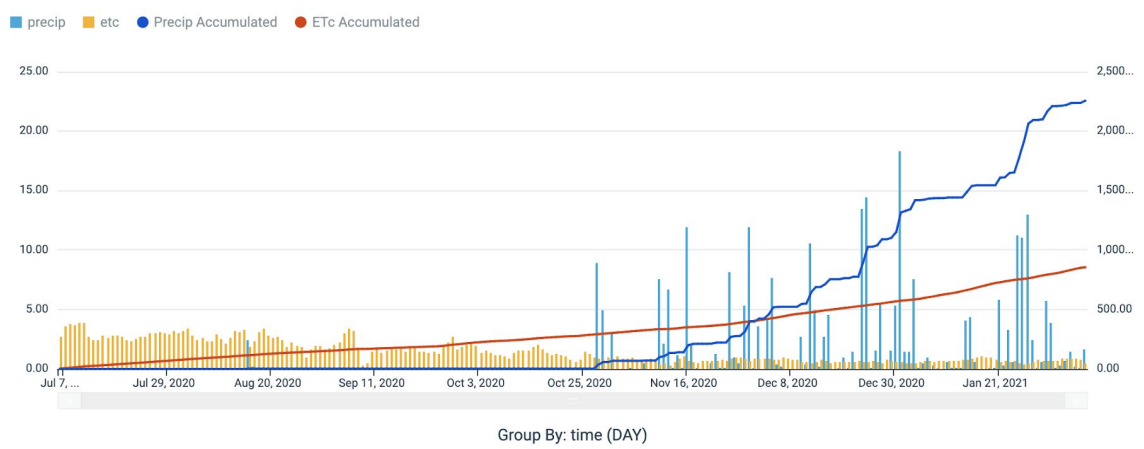
Water | Weather | Plant

Compare Across Sites | Site Deep Dive

Controls: Tenant All | Country All | Site All | Device All | Start Date 2020/03/01 00:00:00 | End Date 2022/12/31 00:00:00 | Full Point 25 | Refill Point 5 | Display Units Imperial | Soil Moisture

v1.0.2: Default view is a sum of all your Site data. Use the control bar to select Device ID, Site name, and start/end dates to populate the graphs. Use Group By on the X Axis to drill up or down to different time scales.

### Evapotranspiration (ETc) vs. Rainfall (in mm)



Day with Highest Total ETc

**Jul 12, 2020**

**3.87 mm**

Day with the Highest Average Precipitation

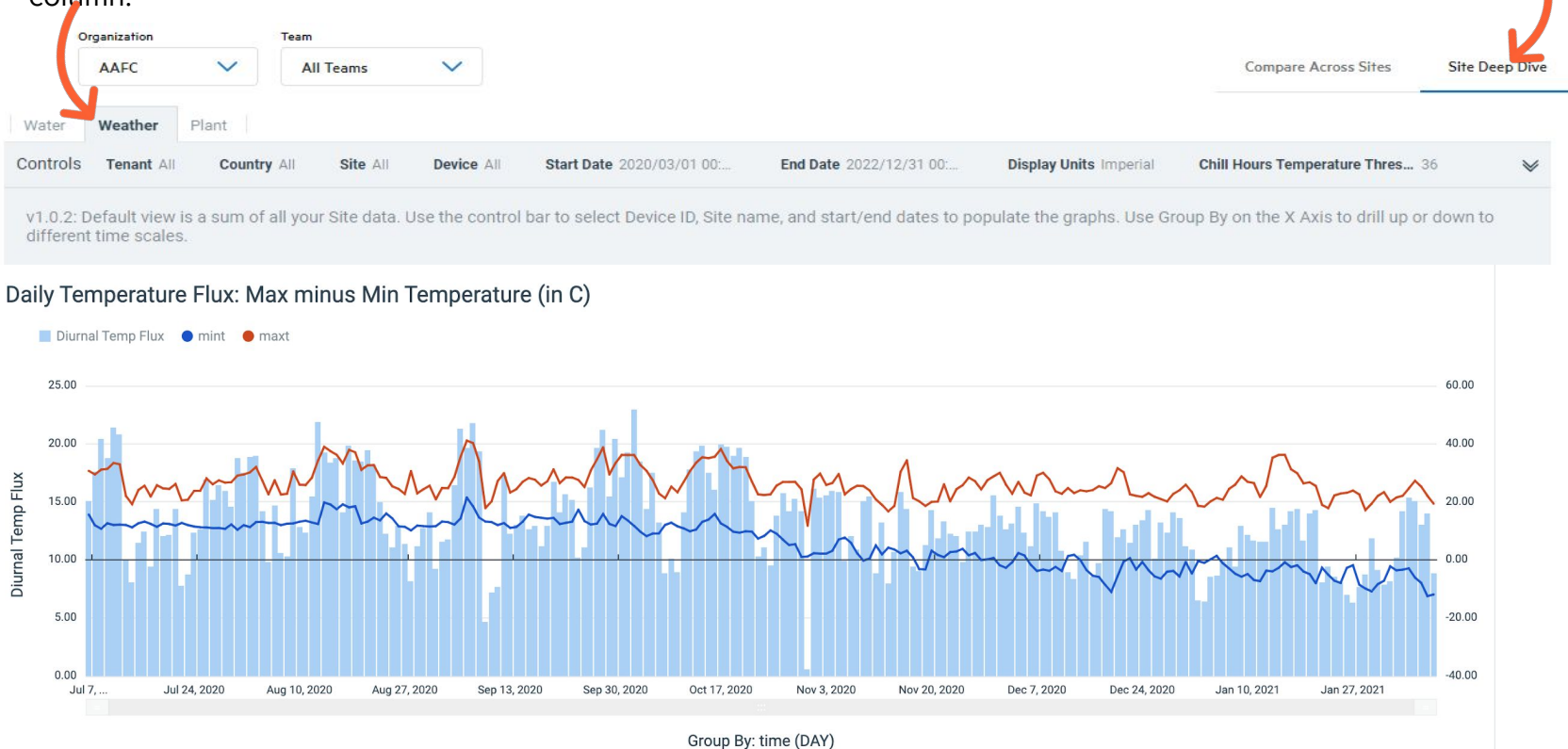
**Jan 1, 2021**

**18.30 mm**

Help

# ANALYTICS : Site Deep Dive, Weather Tab

**Site Deep Dive, Weather** displays cumulative & daily rainfall, daily temperature flux, vapor pressure deficit, heat stress days, freeze days, sunshine duration, and warm nights/cool days. Extreme days are shown in the right-hand column.





# ANALYTICS : Site Deep Dive, Plant Tab

**Site Deep Dive, Plant** displays NDVI, cumulative growing degree days & NDVI (if seasons are set up), sunlight duration & quality, and a seasonal growth overview. Extreme days are shown in the right-hand column.

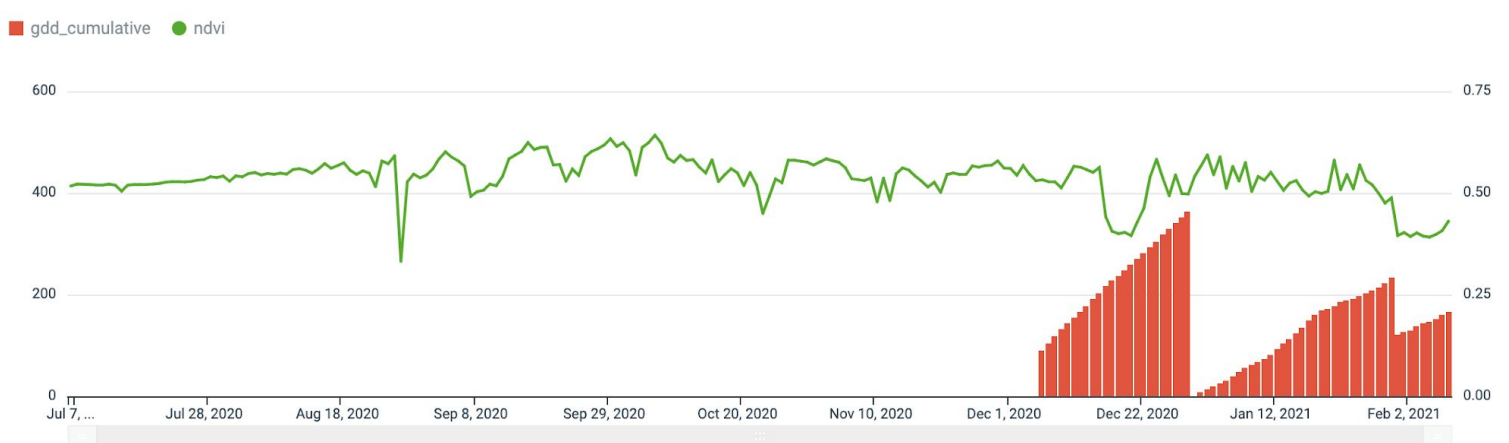
Organization: AAFC Team: All Teams

Water | Weather | **Plant**

Controls Tenant All Country All Site All Device All Start Date 2020/03/01 00:00:00 End Date 2022/12/31 00:00:00

v1.0.2: Default view is a sum of all your Site data. Use the control bar to select Device ID, Site name, and start/end dates to populate the graphs. Use Group By on the X Axis to drill up or down to different time scales.

Cumulative GDD and NDVI (GDD data will be blank if season has not been populated in Arable Seasons Tab)





## Distributor Role



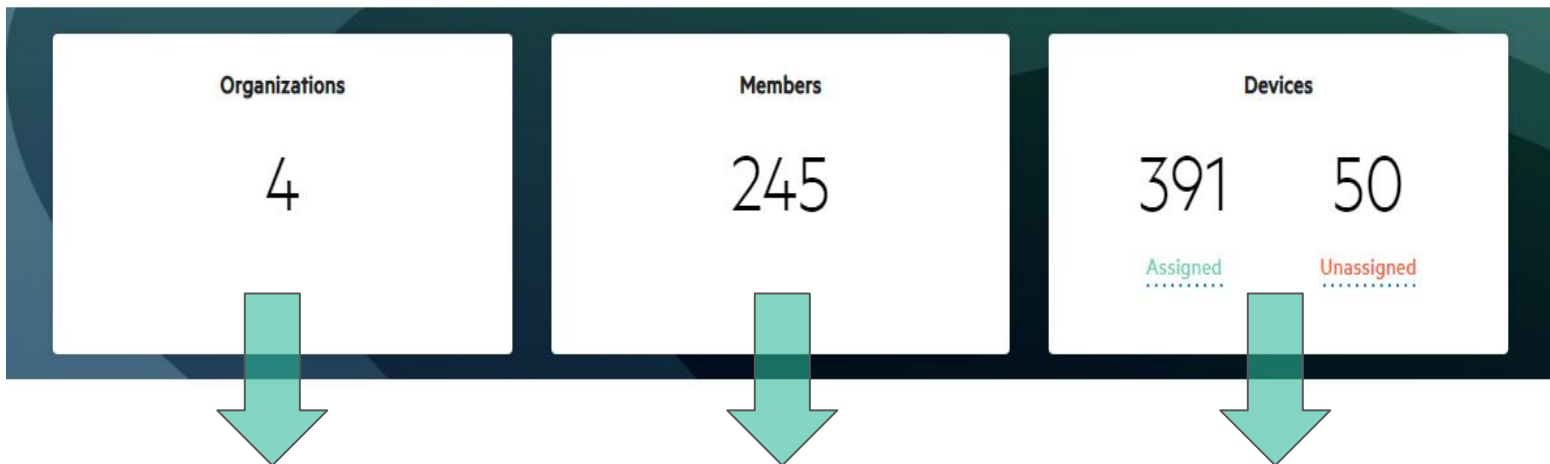
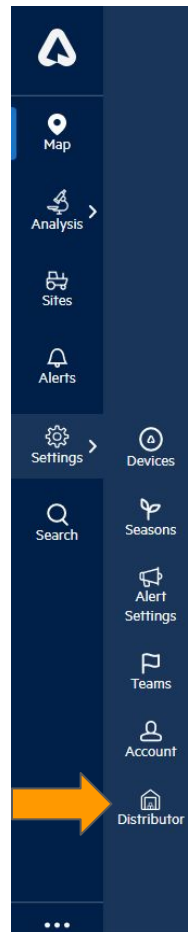
# DISTRIBUTOR: SETTINGS

- Map
- Analysis
- Sites
- Alerts
- Settings
- Search
- Seasons
- Alert Settings
- Teams
- Account
- Distributor

You can navigate to Distributor page by clicking on [Distributor icon](#) under Settings.



# DISTRIBUTOR PAGE



## Organization:

Count of orgs where distributor user is associated with.

## Members:

Count of all members in the orgs listed on distributor page.

## Assigned:

count should be equal to assigned devices, which are all the devices belonging to all the orgs that the user is a part of and not a distributor.

## Unassigned:

count should be displayed, and it should be equal to the total number of devices that really are part of the distributor.

## Distributor- Organization Summary

- Each individual org contains the total number of **Members** and **Devices** assigned to that org.

Organization Name	Members	Devices	
AAFC	13	12	+
Ankit-demo5	1	0	-

Not enough permissions to update this org.

### Devices Assigned to this Organization

- Only users who are a **Distributor** or an **org admin** or **both** of the respective org can rename it, otherwise, an error message appears (**Not enough permission to update this Org**)



## Distributor - Assigned Devices

- 
- Map
- Analysis
- Sites
- Alerts
- Settings
- Devices
- Seasons
- Alert Settings
- Teams
- Account
- Distributor

### Assigned Devices



To view the devices associated to a specific organization, please select the organization from the "Source" drop-down menu.

If you wish to move any devices from one organization to another, please select the devices you wish to move from the source organization, then select an organization from "Destination" the drop-down, and press Return.

Source





Destination





## Distributor - Confirmation Pop-Up

- 
- Map
- Analysis >
- Sites
- Alerts
- Settings >
- Devices
- Search
- Seasons
- Alert Settings
- Teams
- Account
- Distributor
- 




### Returning Devices

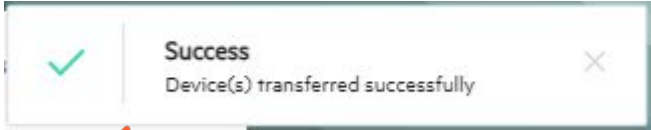
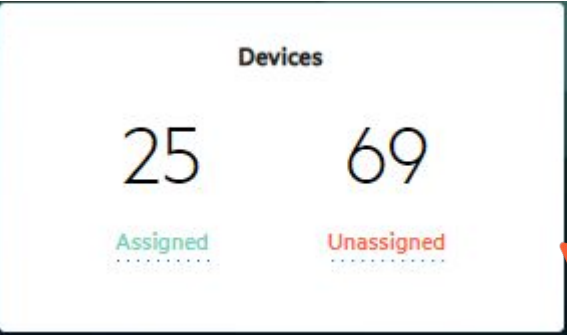

Are you sure you want to return the selected devices from testdemo1 to arable-team?

[Cancel](#) [Confirm](#)

# Distributor Device Stats



- Map
- Analysis >
- Sites
- Alerts
- Settings >
- Devices
- Search
- Seasons
- Alert Settings
- Teams
- Account
- Distributor



Success  
Device(s) transferred successfully

- After clicking the 'Confirm' button, a successful pop message will appear, and the stats **Assigned** count on devices will decrease while the **Unassigned** count will increase.



# Distributor - Unassigned Devices

- Home
- Map
- Analysis
- Sites
- Alerts
- Settings
- Devices
- Search
- Seasons
- Alert Settings
- Teams
- Account
- Distributor

## Unassigned Devices

The devices on this list have not yet been assigned to any Organization. To assign them please select the organization you wish to assign a device from the "Destination" drop-down, select the device(s) you wish to assign from the list, and press **Assign**.

Source

Destination

C004681 ✓	C006877 ✓	C006687 ✓	C005135 ✓	C005430 +
C005449 +	C007712 +	C009024 +	C009125 +	C007485 +
C009665 +	C009070 +	C007659 +	C012035 +	C004543 +

Cancel

Assign



## Confirmation Pop-up

The image shows a confirmation pop-up dialog box within a software interface. On the left is a dark blue sidebar with icons for: Home, Map, Analysis, Sites, Alerts, Settings, Devices, Search, Seasons, Alert Settings, Teams, Account, and Distributor. The pop-up itself has a white background and a dark border. At the top center is a warning icon (a triangle with an exclamation mark). At the top right is a close button (an 'X'). The main text reads: "Assigning Devices" in bold blue font, followed by "Are you sure you want to assign the selected devices from arable-team to Alfa?" in a smaller grey font. At the bottom are two buttons: "Cancel" on the left and "Confirm" on the right.

# Distributor Device Stats

The screenshot shows the ARABLE interface with a dark blue sidebar on the left containing navigation icons for Home, Map, Analysis, Sites, Alerts, Settings, Search, Alert Settings, Teams, Account, and Distributor. The main content area is titled 'Devices' and displays two large numbers: '26' under the label 'Assigned' and '66' under the label 'Unassigned'. The 'Assigned' label is in green and the 'Unassigned' label is in red.

A white pop message box with a green checkmark icon on the left and a close 'X' button on the right. The text inside reads: 'Success' followed by 'Device(s) transferred successfully'.


## Note:

- ❑ After clicking the 'Confirm' button, a successful pop message will appear, and the stat assigned count on devices will increase while the unassigned count will decrease.



## Distributor - Active Device Pop-up

- ARABLE logo
- Map
- Analysis
- Sites
- Alerts
- Settings
- Search
- Seasons
- Alert Settings
- Teams
- Account
- Distributor



**Active Devices Found**


Active devices can't be assigned.  
Please try again.

Close



# Distributor - Create New Organization

- ARABLE logo
- Map
- Analysis
- Sites
- Alerts
- Settings
- Devices
- Seasons
- Alert Settings
- Teams
- Account



## Create New Organization


















### Organization Name

### Source

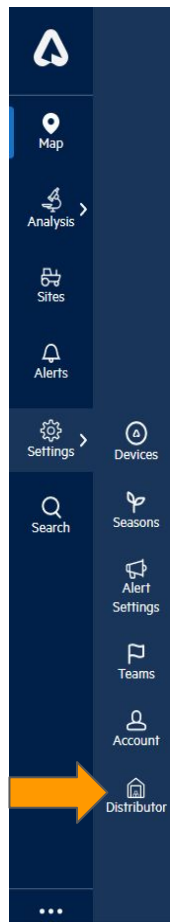
 

### Assign Devices

C004681 	C006877 	C009665 	C005430 	C007712 
C009024 	C005135 	C009070 	C005449 	C012035 
C009125 	C007485 	C007659 	C004543 	C003359 



## Successful Message



Organization created successfully

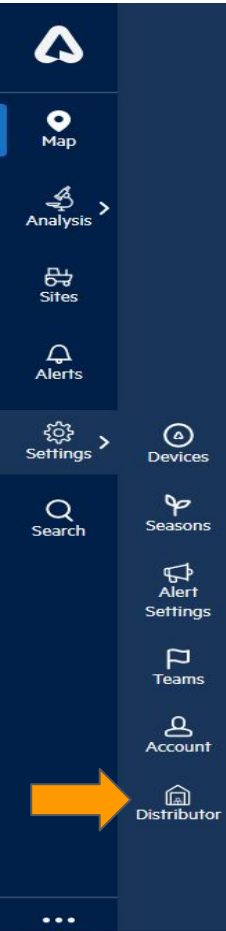
You can now add members to **Organization Name** by going to the [Teams Page](#) and clicking the **Invite Member** button.

Close

Go To Teams



# Devices Stats



## Note:

- ❑ After clicking the 'Confirm' button, a successful pop message will appear and the stat **Assigned** count on devices will increase while the **Unassigned** count will decrease.
- ❑ Also the page will be navigated to the Team page after clicking 'Go To Teams'.



# Distributor - Teams Page

Organization: Guru Team: All Teams

### Teams

Assigned: 0 Unassigned: 0

### Members

Assigned: 0 Unassigned: 0

### Sites

Assigned: 0 Unassigned: 0

[+ Invite Member](#) [+ Create New Team](#)

Team Name	Members	Sites
Administrators	(1) Total	<a href="#">View Team</a>





# Distributor - Teams Page\_Invite Member

**Organization** Guru **Team** All Teams

### Invite Member to Organization

New Current

**First Name**

**Last Name**

**Email Address**

**Select Role**

**Select Team(s)**

**Teams & Roles**

Please enter the member information, assign a role and select a team or teams from the drop down above and click "add".

Map Analysis Sites Alerts Settings Devices Seasons Alert Settings **Teams** Account Distributor

Assigned Unassigned

Assigned Unassigned

+ Invite Member + Create New Team

View Team

Activate Windows Go to Settings to activate Windows. [Help](#)

ABLE

<https://app.test.arable.com/dashboard/settings>



# Distributor - Teams Page\_Create New Team

Organization: Guru | Team: All Teams

### Create New Team

Team Name

Add or Remove Members

Select Team Members

Add or Remove Sites

Select Sites

Add or Remove Devices

Select Device or Locations

Cancel | Confirm

Activate Windows  
Go to Settings to activate Windows

Help



 **ARABLE**