

PICKETA SYSTEMS USER GUIDE

Welcome to Picketa Systems' LENS™ : Your Essential Guide to Optimizing Crop Insights. We are excited to have you using our systems to gather valuable insights and assist you in optimizing your crops. This guide will help you to get started navigating our product. We want to see you have a successful season!



STEP 1: ACCOUNT SET UP

The first step to getting started with Picketa Systems is setting up your account. You or someone on your team should have received temporary login credentials via email. If you did not receive these credentials, please contact us at support@picketa.com

ADD YOUR TEAM



Once you've logged in and have changed your password you can start inviting the rest of your team to the platform. To manage the people on your team who have access to ALL farms, click on "Your Account" under your profile on the top right-hand of the screen. This will take you to the Organization Management page. Here you can add the members of your team who you would like to receive full access to the platform (able to edit, add, delete).

CREATE A FARM AND ADD THE GROWER



Now it is time to create your first farm! On the home page, click the plus sign and enter the farm's name, and address. This is also where you will enter the contact information of the farm owner to invite them to interact with their farm's data. If you would like to add additional users to have access to the specific farm, click the user icon on that farm and enter their information. You can add users as a "Staff", which gives viewing access only, or you can add users as an "Owner", which gives that user full access to that specific farm. Repeat this process to create as many farms as needed.

CREATE YOUR FIELDS

Once the farm is created, you now need to create your field or fields. To get started, click on the farm you'd like to add a field to and then click on the plus sign beside the word "edit". You will have the option to draw a field or upload a shapefile.

If drawing your field, use the pentagon icon on the right side of the map to map out each side of the field. You can edit or delete any shapes also using the tools on the side of the map. You can add as many shapes as needed to map out your field. Once you are done drawing the field, click submit. Before you start scanning you will need to create the scanning locations and identify the cultivar and planting date for the field.



CREATE A CROP YEAR



When you are ready, click on the field you've created and it should take you to the data page for that field. Click on "Create a Crop Year". Enter the cultivar for the field and the planting date. Then use the pin icon on the side of the map to place the markers for the scanning locations on the map. You may want to rename the locations. There is also an option to upload a shapefile to pin your scanning locations.

STEP 2: COLLECT YOUR SAMPLES

Prior to plant emergence, a designated sampling area should be marked out using flags. We recommend marking out an area that is away from sprayer tracks and close to an access road to minimize foot traffic within the fields. A typical sample area is 4-6 rows wide by 5-6 meters deep.

FOR BEST RESULTS

- The part of the plant that should be used for tissue analysis is the 4th petiole from the top. The goal is to pick the youngest fully expanded leaf.
- Samples should be taken around the same time each day.
- Plant tissue should be free of foreign material, including soil. Do not wash leaves with soap or detergent.
- Avoid taking samples within 24 hours of rainfall and within 3-5 days after spraying fungicide, pesticides, or foliar nutrient solutions.
- Keep the petiole and leaflets intact until you're ready for scanning and never store fresh samples in sealed plastic bags as it might develop mold.
- Keep the petiole and leaflets intact until you're ready for scanning.
- Collect samples every 7-10 days beginning 30 days after emergence and clearly label sampling bags to avoid mix-ups.

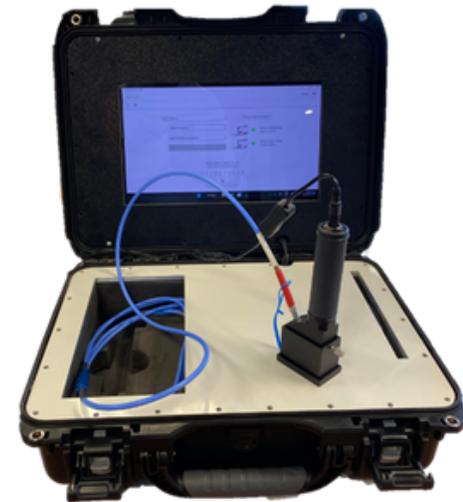


STEP 3: HARDWARE SET UP

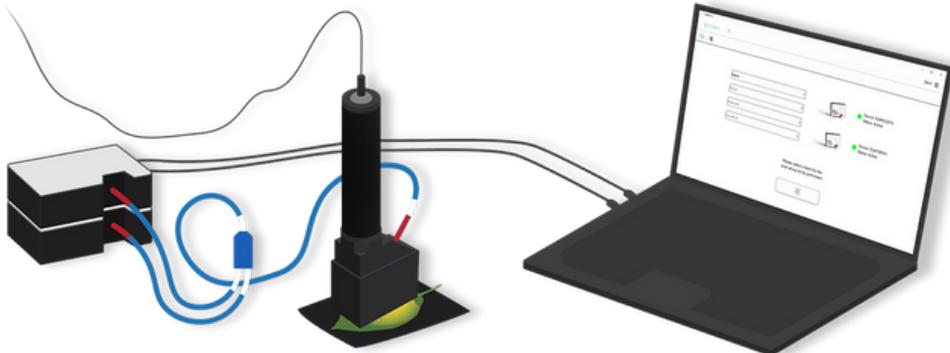
Picketa Systems offers two different types of units. Some additional assembly may be required when using the Stationary LENS unit compared to the Mobile LENS Unit.

- 1 Make sure your laptop is charged especially before going out into the field with a mobile unit.
- 2 You may want to set up your Wi-Fi connection, if not you can still scan leaves in Picketa's offline mode.
- 3 Find a power source to plug in the probe. If the black light switch cord is not already connected to your probe, you will need to plug that into the top of the probe and also connect your power cord that will then be plugged into a power source. If you are using the mobile unit you may need to use power from your vehicle.

If you are using a Stationary LENS Unit, you will also need to connect the fiber optic cord (blue or grey) to both data collection units on one end and connect the other end of the cord to your probe. Then use the two black USB cords to connect each data collection unit to the laptop.



MOBILE LENS UNIT

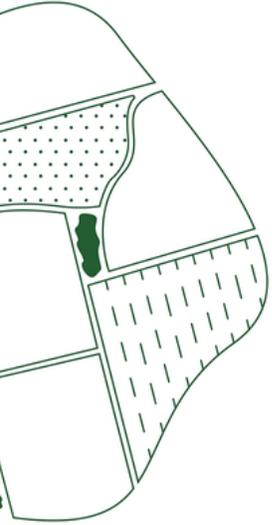


STATIONARY LENS UNIT



It's important to take good care of your equipment. Try to maintain your hardware as best as you can and avoid leaving your equipment in areas where it could get stolen or damaged.

STEP 4: SCAN YOUR LEAFLETS



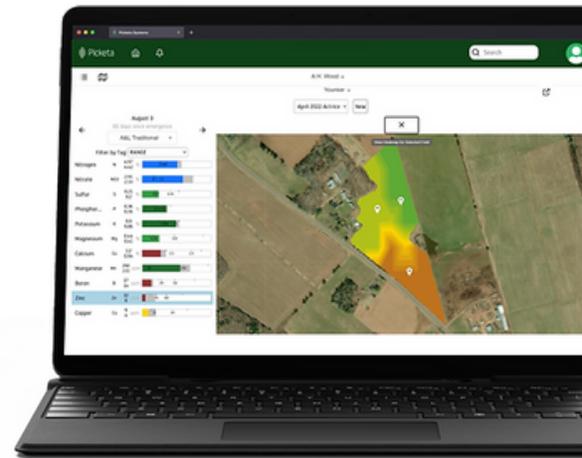
-  Open the Picketa Desktop App and log in.
 -  Select the Farm, Field, and Scanning location from the drop-down options that you would like to analyze.
 -  If you've recently created a new field or scanning location after logging in, you may need to click the refresh button to see those options in the drop-down menu.
 -  Click on "Refresh Spectrometers" and wait for the circles to turn from red to green.
 -  Follow the prompts at the bottom of the screen to calibrate the LENS. It should ask you to turn on the probe light and click the button, then turn the light off on a black surface, and click the button. Don't forget to turn the light back on before you start your leaf scanning.
 -  Now you can start scanning your leaflets! Each leaf sample must be at least 1cm by 1cm. A minimum of 10 and a maximum of 50 scans must be completed for each sample.
-  If you begin sampling and realize that you've selected the wrong field or sampling location, you can select the unlock button next to the drop downs to allow you to change your selection and resume scanning.

STEP 5: VIEW THE DATA

To view the data, you will need to log into your account at picketa.com. From here you can select the Farm and Field you'd like to analyze and view the levels of 13 important nutrients. On the data page you can compare the changes in nutrient levels throughout the season, click on each nutrient for more details, export the data to PDF/Excel, and view a heat map of your results.

NEXT YEAR'S CROPS

When it is time to replant next year, you do not need to start all over. Simply click the "Manage Crop Years" button on the data page of the field you would like to continue collecting data for and add a new crop year. This will create a new page for collecting data for that field but you will still be able to see the data for previous years using the drop down.



 For more information on how to set up your hardware and scan your leaves, check out our YouTube channel: <https://www.youtube.com/@picketasystems9458>



NEED HELP?

Email us at support@picketa.com
Phone us at +1 (506) 479-4910
Or reach out to your customer representative

We are happy to help!