

FIELDLAB USER MANUAL APRIL 2019



Imprint

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Contact details can be found on the back page of this manual.

Information

The information included in this manual corresponds with our current state of knowledge and is no claim for completeness. The recommended usage instructions are non-binding.

Always refer to the latest version of the User Manual.

Declaration of conformity

Field Lab device comes with type label included. It proves that the device conforms with applicable regulations. The Declaration of Conformity is available upon request.

Note! Grainsense application automatically stores location information of every measurement if location rights are granted to the application. The measurement location corresponds to the location of the phone.

Note! The device has no memory to store any results.

3.3.2.3 Viewing the results, adding notes and averaging and sharing results

For viewing the results

1. Open GrainSense mobile application, go to “Measurements”
2. Click any result to open a result view

For adding notes

1. Open GrainSense mobile application, go to “Measurements”
2. Click any result to open a result view
3. Click on “Comments” to add any comments.
4. Click on “show on maps” to see the location of the measurement

For deleting measurements

1. Open GrainSense mobile application, go to “Measurements”
 - a. Click on the pencil on the right up corner
 - b. Select the measurement(s) to delete
 - c. Click on the bin “Delete”

Or

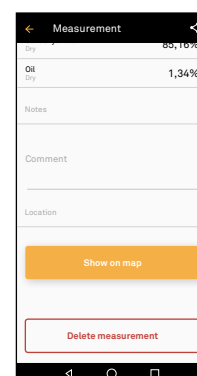
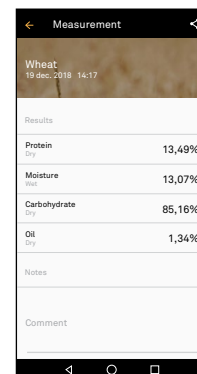
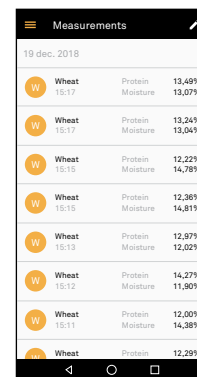
1. Open GrainSense mobile application, go to “Measurements”
2. Click any result to open a result view
3. Click on “Delete measurement”

For averaging several measurements

1. Open GrainSense mobile application, go to “Measurements”
 - a. Click on the pencil on the right up corner
 - b. Select the measurement(s) to average
 - c. Click on the “Average” icon

For sharing results

1. Open GrainSense mobile application, go to “Measurements”
2. Click any result to open a result view
3. Click on the share button



3.4 Maintenance and servicing

The sampling tray should be kept clean and the batteries changed when needed. To assure the accuracy of the measurement, the device should be regularly connected to the phone to upload the latest updates from the cloud to the device.

3.4.1 Updating the calibrations on the device

When new calibration updates are available (usually in the summertime - user informed by the distributor or the GrainSense Newsletter), the pairing of the phone and the device should be done again.

For that, the app should be completely closed and the device turned off. Then, the app should be opened with a working internet connection (to synchronize with the cloud) and the device connected to the phone. To be sure that the calibration updates have been uploaded to the device, close again the app and turn off the device.

3.4.2 Replacing the batteries

Turn off the device. Open the battery cap with a flathead screwdriver and replace the old batteries with batteries of the same type: 6 x AA Alkaline.

We recommend using AA batteries labeled for industrial use for maximum performance (i.e. optimized for high drainage).

Note! Please make sure the batteries are inserted into the device properly.

Note! Please make sure that the cap is well closed.

3.4.3 Cleaning

The tray is removable and opens by turning it counter clockwise about 40 degrees.

Never use running water or chemical cleaning agents on the sample slot (e.g. domestic cleaner, alcohol or cleaning solvent). If required, clean the sample slot with a dry, clean and soft cloth.

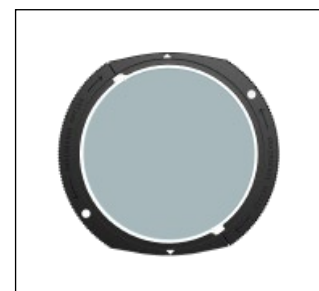
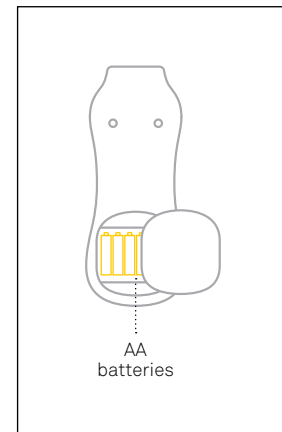
3.4.4 Transport and storage

The device should always be transported and stored in the carrying bag (see 2.1.3 Technical specifications, page 8).

When transporting the GrainSense, avoid knocking and scratching the display. Keep the GrainSense device in the supplied belt bag. Only take the device out from the carrying bag for measuring.

3.4.5 Disposal

The device and batteries may not be disposed of in normal domestic rubbish.



4. Help

Note! FAQ and Troubleshooting can be found on GrainSense’s website, in the support page: www.grainsense.com. You can also the tutorials on GrainSense youtube channel.

4.1 Troubleshooting

My device shows “Wheat” but it shows “Barley” in the app

Make sure that the device is paired with the phone. After shutting down both the device and the app, turn them on. On the app, go to “Device”, click on “Connect to device” and wait for pairing.

I am trying to measure rapeseed but the device keeps saying “Too small”

For rapeseed, the amount of seed should correspond to about 2gr. After loading the seeds on the tray, take the device in your hand and move it around so all the seeds slide down the tray without overlapping. About 40% of the tray surface should be covered.

My device shut off when I tried to take a measurement

Unfortunately, different branded batteries can behave differently, which means our software doesn’t capture the capacity correctly. In these cases, the batteries can stop working without any indication of battery led. Change the batteries.

We always recommend by best possible Alkaline batteries (AA) that are optimized for high drains (e.g. for remote controlled cars).

My device won’t turn on

Just be sure to make sure that all batteries are full, installed correctly and that the back of the device is screwed on properly. Simply hold the power button until the screen turns on.

My device is broken, what can I do?

Please contact the local salesperson or distributor. They will help you with further actions. You can also contact the support service of GrainSense at support@grainsense.com. Please contact us clearly stating the problem, your contact details, device serial number, and the email of your registered account.

The arrows on the device are not changing the species

The device is connected to the app and only shows the species that are selected on the app. To change or add other species to the device, make sure that your device and the phone are connected. Then on the app, go to “device” and click on “Select calibrations”, choose the species you want to upload to the device.

4.2 FAQ

What do I get in the package?

The package includes the following items:

- GrainSense device
- AA batteries (installed)
- Grain measurement cup
- Official Cap
- Carrying case
- Quick guide

How accurate is the device?

If used properly, based on the guidance, the accuracy is the same level expected from a laboratory level device.

What species are included in the price?

At the moment, GrainSense developed five calibrations: wheat, barley, oats, rye, and rapeseed. New species can be added according to needs and available species are country specific. Please check which harvest updates are available in your selected region. Event though all 5 species are visible in the app, only the species calibration supported for your country will give an accurate result. Please check with the salesperson or distributor.

What technology is behind GrainSense?

The basic measurement principle is identical to that used in laboratory devices, namely near-infrared spectroscopy. The main difference behind the GrainSense device is it's patented sphere design to make measurements. The sphere design reduces the amount of light that escapes, thereby allowing the device to be battery operated and handheld.

How big should the sample size be, and is it representative?

The sample size should be 60–80 kernels, which is a statistically representative sample size (3–5 grams). If the sample is too large, there is a risk of kernels covering each other and distorting the results. If you have a large batch, we recommend taking 3–4 samples from different places. The GrainSense app will then help you calculate the average values.

Where will my data go and who can access it?

When you send your results from your device to the GrainSense app, your data will be securely stored in our database. Only you will be able to access your personal data via the GrainSense app and the Farmer Dashboard.

If I make a measurement, can I send the results to someone else?

After saving a measurement to your GrainSense app, you can share your results via WhatsApp, Email, Facebook and many other networks.

Can I use GrainSense without a phone?

You need a phone and an account to upload your settings into your device, including your selected species. When that is set, you can use the device without a phone. Please note, without a phone you will not be able to store your results anywhere, neither get the GPS location of the measurement.

What sort of guarantee is included?

The device comes with a 1-year technical guarantee. The grain species calibrations are kept up-to-date on a yearly basis, which will automatically be available for download on the GrainSense app. (See the Terms of Use available of GrainSense website, in the “Support” page).

Do the grain calibrations work for grain from anywhere in the world?

We can only guarantee lab-level accuracy for the grain calibrations in the countries we are currently supporting. In countries where we are not officially selling GrainSense yet, the results may vary as laboratory devices per country are annually calibrated with different samples.

CONTACT

For any support, please
contact your salesperson or
support@grainsense.com