

## MAKE GPS IN THE FIELD WORK FOR YOU

LEARN HOW TO MITIGATE IMPLICATING AN  
ENTIRE FIELD UNNECESSARILY

- What are the **financial** and **logistical** impacts of a positive test result in a pre-harvest sample?
- If you found yourself having to choose, would you *rather lose product on only one portion of a field, or lose an entire field?*
- What if you lost out on that choice because you couldn't rule out **where the positive came from**, even though you tested in multiple increments?

## SCENARIO

A leafy green grower has set up their Food Safety Plan to test individual acres of every field for *Salmonella*. This operation has chosen to contract a third party sampling company to perform all sampling and deliver to their testing laboratory. The SOP requires an n=60 sample plan per individual acre, with the entire sample to be enriched and tested.

The testing laboratory receives 10 samples representing a requested 10 acre field. Upon testing, all 10 samples yield a positive for *Salmonella*. Immediately, the laboratory works to rule out cross-contamination and/or laboratory error. In the absence of finding any evidence of contamination or error, the grower approaches their sampling company. No GPS points of sample path or pattern were collected to show where the sampling occurred.

After investigation, the sampler admitted to the grower that they only sampled one portion of the field and put the samples into 10 bags. In this extreme case, the sampler happened to choose a portion of the field that yielded a positive, and incorrectly implicated the entire field versus a subset.

Regardless of the admission of the sampler, this still poses a liability to the growing company and raises red flags on how many other times this has happened.

## “TRUST BUT VERIFY”

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When paying either in-house employees or a third-party to collect your samples, you trust them to follow the agreed upon protocols – protocols developed by industry, buyers, or regulatory agencies. But is “trust” enough to prove they are adhering to what is required?

One way to verify is through the use of GPS coordinates during sampling. Many growing operations are familiar with GPS points utilized in audits and for mapping out acreage boundaries. But GPS can also be collected during sampling to demonstrate the path followed by a sampler during collection, and then made available to the grower in several formats.



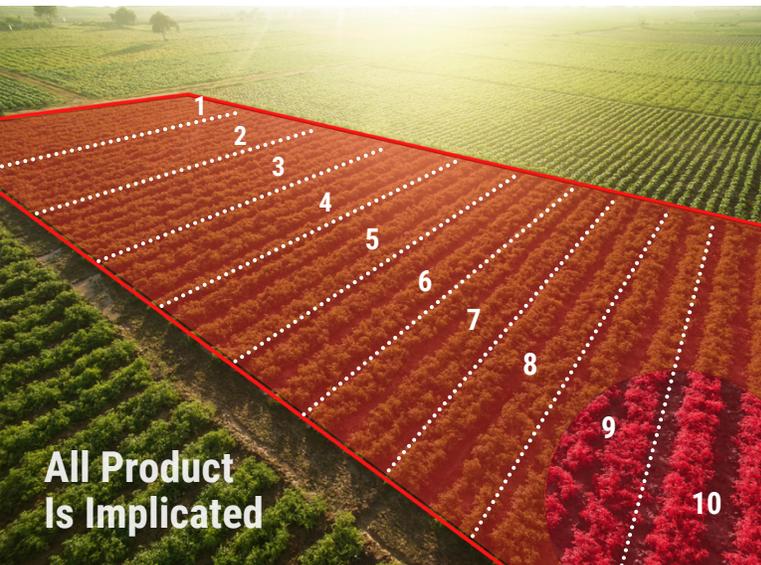
If GPS points had been utilized in the scenario outlined above, the sampler would have collected 600 GPS points over the entire 10 acres (60 points per acre). If provided to the grower and/or the laboratory, it would have added confidence that the samples tested reflected what was requested.

### Example Sampling Event

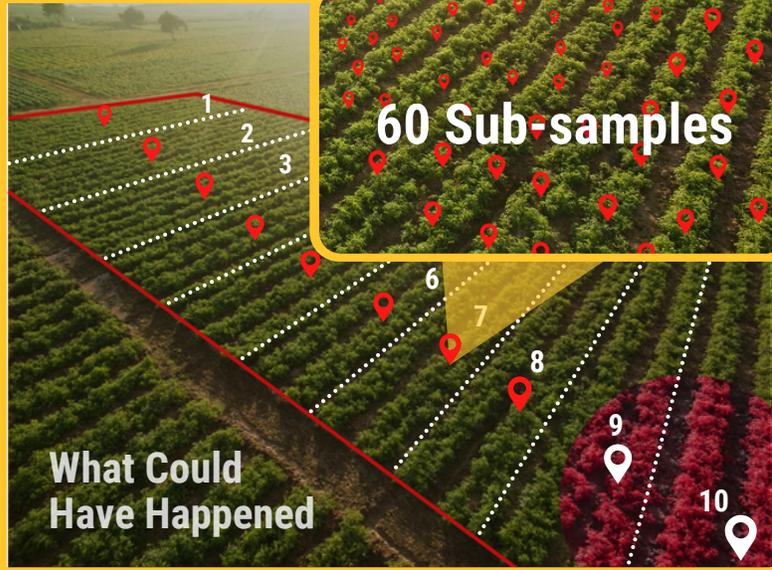


Note: The image above represents 10 acres. In the scenario described, all the samples were taken from a single location in the corner of the field. A sampling pattern was not followed nor were GPS points taken. Without GPS points the positive areas are indistinguishable, meaning the entire field is implicated and not just the positive area.

### Example Outcome



### PrimusLabs Sampling



Note: The image above illustrates 10 acres, 1 sample per 1 acre, totaling 10 samples. The GPS point icon above represents that GPS points were taken for each 1-acre sample. The picture in the right corner illustrates every sample (1 acre) has 60 sub-samples with GPS points. Samples taken from positive areas are now distinguishable with GPS points.

### Potential Outcome



\*Note: This representation is for illustration purposes only, this does not depict real sampling protocol or patterns.

While no system is perfect, when looking into root-causes of problems in the field, the added value of GPS points can go a long way in adding confidence and ruling out larger issues from the start.

# PRIMUSLABS' SAMPLING SERVICES

PrimusLabs is a leader in third-party sampling services for the fresh produce industry. Our samplers utilize GPS points with every field sample collected (products and waters), and all sampling information is available in multiple formats. Additionally, customers who collect samples themselves or with other 3rd Party Sampling companies can submit GPS points alongside requests for inclusion with the results!

Utilize the value of GPS points to the fullest and see the whole picture of your food safety program.

- View GPS points directly from the result COA (link to a live map or list the GPS points directly on the result)
- Review and access GPS points from past samples to samples currently under analysis by using the PrimusLabs App, available for no-charge to PrimusLabs' customers. Get started today!

Track samples, sign results,  
monitor GPS points and more!

Check out the PrimusLabs App  
powered by Azzule Systems.



#### Do you still have questions?

Our technical specialist are ready to help answer all your questions. Contact us today.

[Microbiologists@primuslabs.com](mailto:Microbiologists@primuslabs.com) or [Chemistsgroup@primuslabs.com](mailto:Chemistsgroup@primuslabs.com)

**CONTACT US TODAY** to start your pre-harvest testing program!

805-922-0055 | [www.primuslabs.com](http://www.primuslabs.com)

Find a lab near you.

Santa Maria, CA (Headquarters)  
Salinas, CA - Yuma, AZ - Lakeland, FL

## Pre-Harvest Testing Resources

Dive into LGMA Appendix C Pre-Harvest testing recommendations, and how PrimusLabs can help you meet them.

- LGMA'S Pre-Harvest Testing Requirements  
[https://www.primuslabs.com/wp-content/uploads/2021/09/LGMA-Pre-Harvest-Testing-PrimusLabs-Resources-Rev\\_1.pdf](https://www.primuslabs.com/wp-content/uploads/2021/09/LGMA-Pre-Harvest-Testing-PrimusLabs-Resources-Rev_1.pdf)

Navigating CFIA Romaine Testing Requirements with PrimusLabs

- Understanding How LGMA Appendix C Can Help with Compliance  
<https://www.primuslabs.com/navigating-cfia-romaine-testing-requirements-with-primuslabs/>

Learn about Azzule System's supply chain management platform. Enable the movement of data up and down the supply chain.

- Food Safety & Supply Chain Compliance Systems. Azzule Systems.  
<https://azzule.com/>

Western Growers (WG) recently updated the Pre-Harvest Product Sampling and Testing Industry Guidance for Leafy Greens Operations, otherwise known as "Appendix C" of the LGMA-approved metrics.

- Appendix C: Pre-harvest Product Sampling and Testing Protocol  
<https://www.wga.com/resources/appendix-c-pre-harvest-product-sampling-and-testing-protocol>
- FAQ for WGA Appendix C  
<https://www.wga.com/sites/default/files/resource/files/Appendix%20C%20FAQ%209-23-21.pdf>

Find additional research and commodity specific information at the Center for Produce Safety.

- <https://www.centerforproducesafety.org/>

