Streamlining Sample Intake and Process Managementfor the Center of Regenerative Agriculture and Resilient Systems

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Introduction

The Center for Regenerative Agriculture and Resilient Systems (CRARS) mission is to investigate, develop, demonstrate, and educate about regenerative practices that both restore and enhance the resiliency of living systems and communities. CRARS takes on clients from around the state to provide analyses of soil and food samples, allowing clients to improve upon their regenerative practices.

Recommendations

For further development, we recommend developing barcodes for each employee involved in the intake process and further development of the report to fit the centers needs.

Acknowledgments

Dr. Robin Donatello[(1a)], Dr. Garrett Liles[(CRARS)]

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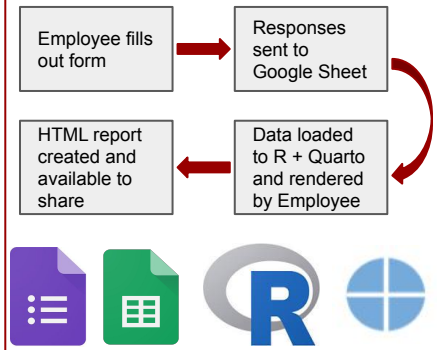
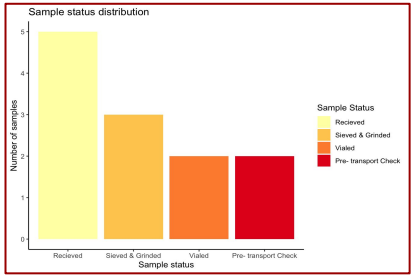
Mission

This project aims to streamline the soil sample intake process for the Center of Regenerative Agriculture and Resilient Systems (CRARS) using barcode scanners. The CRARS team currently uses Slack communication in addition to a collaborative Excel document to update other team members on their progress in the lab, which can lead to lost or overlooked updates on sample progress through the intake process. By implementing a tracking system using barcodes, the team will be able to clearly document each stage of sample intake. Below is the intended workflow of the tracking system.

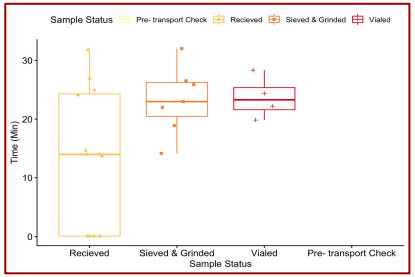


CRARS and RAD Lab Soil Intake Progress Report

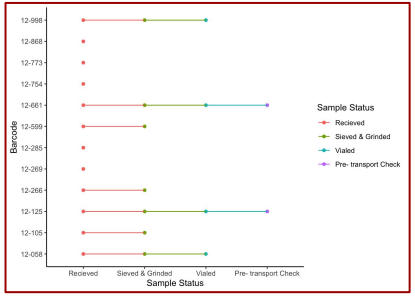
The report generated from the R + Quarto document will produces visualizations and other helpful reports as shown below.



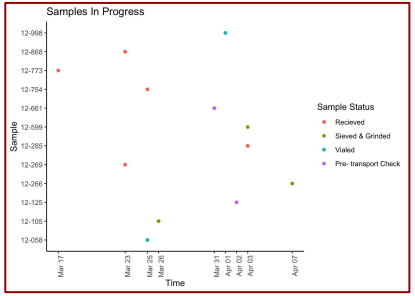
Shows the distribution of samples in each of the intake processes.



In this visual we show a box plot of the time distribution between process for every sample. Although we cannot see specific samples we can see where they lie within the distribution.



This section shows the reader a progress linebar where as a sample goes through the intake the line will progress from left to right.



This scatter plot shows where the samples are in the intake process and also provides a date that they were entered.