

2022 'Honeycrisp' Fruit Collection for Peel Sap Starts in Early July

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In early July we will begin a cooperative effort between Cornell extension, growers, consultants, and storage operators to collect Honeycrisp fruitlets statewide to analyze them for mineral nutrient concentrations. This is part of a statewide extension effort funded by ARDP to evaluate Honeycrisp orchards throughout the state for determination of fruit storage potential and the risk of bitter pit in storage.

For the last several years we have evaluated peel SAP analysis to predict bitter pit early in the growing season to allow better decisions on mitigation efforts during the rest of the season and storage potential. **Peel SAP analysis is being offered statewide for a 2nd year**, with the support from NY Apple Research and Development Program. In 2021 we evaluated over 250 blocks across New York State and will offer this opportunity to growers again this year.

We would like to encourage all Honeycrisp growers to start thinking about which Honeycrisp blocks (or ideally all blocks at your farm) you would like to collect fruit for peel SAP analysis this July. We are specially inviting all packinghouses and their Honeycrisp fruit growers to submit peel samples to CCE this season.

If you participate, you will first need to sign up and pay for all samples using the registration at the following link: https://lof.cce.cornell.edu/event_preregistration_new.php?id=1673. You will then follow the link provided in your registration confirmation email to complete the Qualtrics form with the necessary details for each sample. Then, in July at the date announced by your local CCE specialist, collect a 30-fruit sample from each of your Honeycrisp blocks. Then weigh the sample to get the average fruit weight in grams (see note below), peel the fruits, freeze the peel sample, and then contact your local fruit extension specialist for submitting the sample. We will then analyze the peel sap for nutrient concentrations and send you a report on nutrient ratios and recommendations for mitigation actions and storage recommendations by late July. We believe that this new and early predictive tool will allow for more effective management of Honeycrisp fruit nutrition to reduce bitter pit incidence.

There will be a nominal fee of \$5 for each sample submitted but most of the analysis cost will be covered by the ARDP grant we were awarded.

Fruit Sampling Protocol

- First, watch the following 5 minute video on how to sample and peel your fruit: <https://www.youtube.com/watch?v=hYCqE0FwANI>
- Collect a 30-fruit sample from each of your Honeycrisp blocks. Select 30 trees that represent all the trees in your block and sample one exposed fruit per tree from the south part of the tree canopy at the height of 5 to 7 feet from the ground. Put all fruits in a clean plastic bag. Keep the stems attached as you pick.

- Weigh each sample to get the average fruit weight in grams BEFORE peeling the fruits. This measurement is extremely important, as this weight data will be used to correct and standardize the nutrient ratios by factoring in the effect of fruit size. We encourage all growers to use their digital kitchen balances (if working properly) or buy a cheap balance on Amazon at \$9.99. Please check the following link: [low cost scale](#)
- Remove the stems, and clean the surface of the sampled fruits with a wet paper towel with either purified or distilled water (tap water contains minerals that will skew your results).
- Dry the fruits with a dry, clean paper towel.
- Use a kitchen peeler to remove two pieces of peel on two opposite sides of each fruit from the stem end to the calyx end. (60 pieces total, 2 from each fruit)
- Place peels in a well labeled Ziploc bag and zip it tightly. With a permanent marker, write down the farm/grower name, block name, cell phone #, email, sampling date, and average fruit weight in grams.
- Place the bags in a freezer immediately.
- Email Mike mrb254@cornell.edu and Terence tlr1@cornell.edu that your samples have been prepared and are ready for pickup.

To facilitate the collection of samples we ask that you now complete the ***Register for the number of blocks you will be testing and complete the Qualtrics Form linked in your registration confirmation email.*** After the samples are collected the frozen sample(s) will be transported for peel SAP analysis at Cornell Nutrient Analysis Lab in Ithaca.

We hope all Honeycrisp growers in cooperation with their packing and marketing company, will submit a sample from **each** Honeycrisp block in NY for peel SAP analysis via CCE this season!