Breeders can now more effectively determine the best parents to combine and the best seedlings to advance. This approach reduces the need to grow and sort through thousands of seedlings that are unlikely to meet requirements for both disease resistances and fruit quality.

These DNA tests predict levels of:
- fruit flavor (acidity, sugar)
- fruit skin color
- fruit texture
- maturity date
- disease resistance (fruit bacterial spot)
- fruit traits such as shape and flesh color

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Upcoming trait targets for DNA test development include:
- foliar bacterial spot resistance
- brown rot resistance
- post-harvest fruit quality

This enhanced breeding efficiency, accuracy, speed and creativity due to strategic applications of DNA tests is enabled by the U.S.-wide RosBREED project (www.rosbreed.org).
RosBREED is a Coordinated Agriculture Project composed of a multi-state, multi-institution, and multi-disciplinary team of scientists dedicated to the accelerated genetic improvement of U.S. rosaceous crops using diagnostic DNA tools. This project is funded through the USDA-NIFA Specialty Crop Research Initiative by a combination of federal and matching funds.