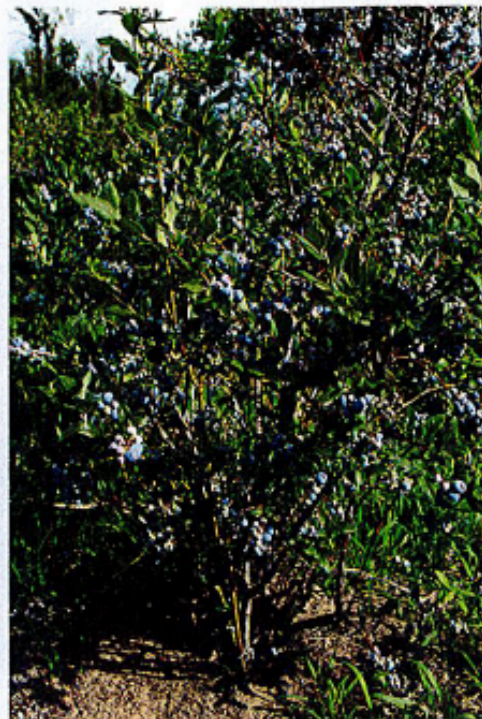


BLUEBERRY

Blueberry survey seeks industry input on breeding needs



Researchers involved in studying blueberries at North Carolina State University include, from left, James Ballington, emeritus professor, blueberry breeding; Hamid Ashrafi, assistant professor blueberry breeding and genomics; Massimo Iorizzo, assistant professor plant genetics and nutritional genomics, and Yuniang Zhao, research assistant. Photo: North Carolina State University

By Gary Pullano
Associate Editor

A survey was sent out recently to gather information for blueberry breeders, so they can target the highest priority issues facing today's growers.

The survey was distributed at blueberry and cranberry association meetings through the fall and winter. Organizers are presenting this project as a unique opportunity for growers to share their challenges with breeders, according to the North Carolina Blueberry Council.

A national team of 25 blueberry and cranberry scientists from 11 institutions around the country are working together for the first time to establish a coordinated approach and define research objectives that will ultimately accelerate the development of improved cultivars by selecting for traits that are relevant to stakeholders, according to the council.

The team will determine the most desirable traits for future cranberry and blueberry breeding by distributing a survey to blueberry and cranberry stakeholders, including growers, nurseries and

processing/packing operations. The survey results will lead the discussion among the leading cranberry and blueberry researchers when they convene in 2017 to discuss the latest genomic approaches to breeding, according to the council.

The research team has identified several target attributes for breeders to consider. These include fruit quality, insect and disease resistance, plant and fruit characteristics to improve machine harvest, frost tolerance and heat resistance.

"We thank growers for completing the survey and playing a vital role in the future breeding efforts of blueberry," said project director Massimo Iorizzo, assistant professor, Plants for Human Health Institute, North Carolina State University (NCSU).

"The development of new cultivars is among the most common priority across all lists," Iorizzo said. "In the long term, this priority will also cover a broad range of other needs included in the lists (e.g., improved disease resistance, fruit quality, improved environmental adaptation, abiotic stress tolerance and mechanization). However, resources are lacking to take these efforts to the next level and

establish a science-based approach, integrating the most advanced technology to address long-term critical needs."

The project is funded by a USDA Specialty Crop Research Initiative Planning Grant.

"We hope to keep U.S. scientists working on blueberry and cranberry unified under the *Vaccinium umbrella project/consortium*," Iorizzo said. "The expectation is to gain useful information about the most important traits for the blueberry and cranberry stakeholders when it comes to developing new varieties. We will apply it to a much larger grant (e.g. USDA-NIFA CAP) that will enlarge the genetic, genomic and phenotypic resources of cranberry and blueberry, and develop tools to accelerate the selection of improved cultivars."

Iorizzo said the research study is being done "to get to know your primary concerns related to cranberry and blueberry production and performance of cranberry and blueberry varieties. If you take part in the study, you will be asked to identify the most and the least important diseases

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The work of blueberry breeders will be aided with information gathered by a survey of growers. Photo: Gary Pullano

and insect pests affecting your cranberry or blueberry crops; identify the most important fruit quality and plant genetic traits that would enhance the economic sustainability of your business; provide information about the size of your operation, years of experience in producing blueberries or cranberries, and location of your business."

The data for this study will be kept confidential to the extent allowed by federal and state law, Iorizzo said. He said the results of the study may be published or presented at professional meetings, but the identities of all research participants will remain anonymous. The data for this

study will be kept for five years. There will be no costs or any form of compensation for participants taking part in this study.

"We will have the survey available online until March 15 to blueberry and cranberry growers, nurseries and processors," Iorizzo said.

The survey can be accessed by visiting the NCSU Plant Genetics and Nutritional Genomics Lab website, clicking on "Vaccinium Project."

Questions regarding the survey can be directed to Iorizzo at miorizz@ncsu.edu. FGN



Vaccinium project director Massimo Iorizzo, assistant professor, Plants for Human Health Institute, North Carolina State University. Photo: North Carolina State University