



Student Collaborative Organic Plant Breeding Education

The Tomato Project

The team's breeding goals are to develop heirloom-like tomato varieties with increased disease resistance, higher yields, excellent flavor, improved fruit quality, attractive colors, unique shapes, and architecture that is easy to manage via trellising. The team is working to develop both inbred lines and hybrid varieties that combine the best traits associated with heirloom varieties and agronomically and horticulturally improved varieties, such as higher marketable yield, reduced fruit cracking, disease resistance, and better growth habit, especially for production in the dry heat of California's Central Valley. Since 2022, the SCOPE program began evaluating F1 hybrid tomatoes in addition to inbred lines at Davis and Pomona in collaboration with Cal Poly Pomona and other tomato breeders. These F1 hybrids were made using inbred lines from SCOPE and collaborating breeding programs. Before public release, preferred inbred lines and hybrids must be field-tested multiple times in multiple locations. SCOPE tomato lines are currently being trialled on farms in Sacramento, Yolo, Los Angeles, and Humboldt counties. The SCOPE program plans to release two inbred varieties soon: 'UC Rockin' Roma', a high-yielding red roma-like tomato with good flavor, and 'UC Orange Creamsicle', an heirloom-like orange beefsteak with green shoulders with good flavor and minimal fruit quality issues common in beefsteaks. The SCOPE project is funded by the Organic Research and Extension Initiative of the USDA National Institute of Food and Agriculture (Grant #2023-51300-40960).



Get Involved

The SCOPE project is currently seeking collaborations with growers and seed producers for on-farm trials. We are also looking to expand to new crops that are integral to the California organic seed industry. To become part of the SCOPE network of on-farm trials, or propose a collaboration for a new crop, contact: scope@ucdavis.edu

For more information on the projects, visit: plantbreeding.ucdavis.edu/scope-project

