Working Together for Florida's Crops

UF IFAS UNIVERSITY of FLORIDA

The partnership between the Crop Transformation Center (CTC) and the Citrus Research and Education Center (CREC) aligns capabilities, expertise, and resources into a unified system that functions as a "collective mind and body."

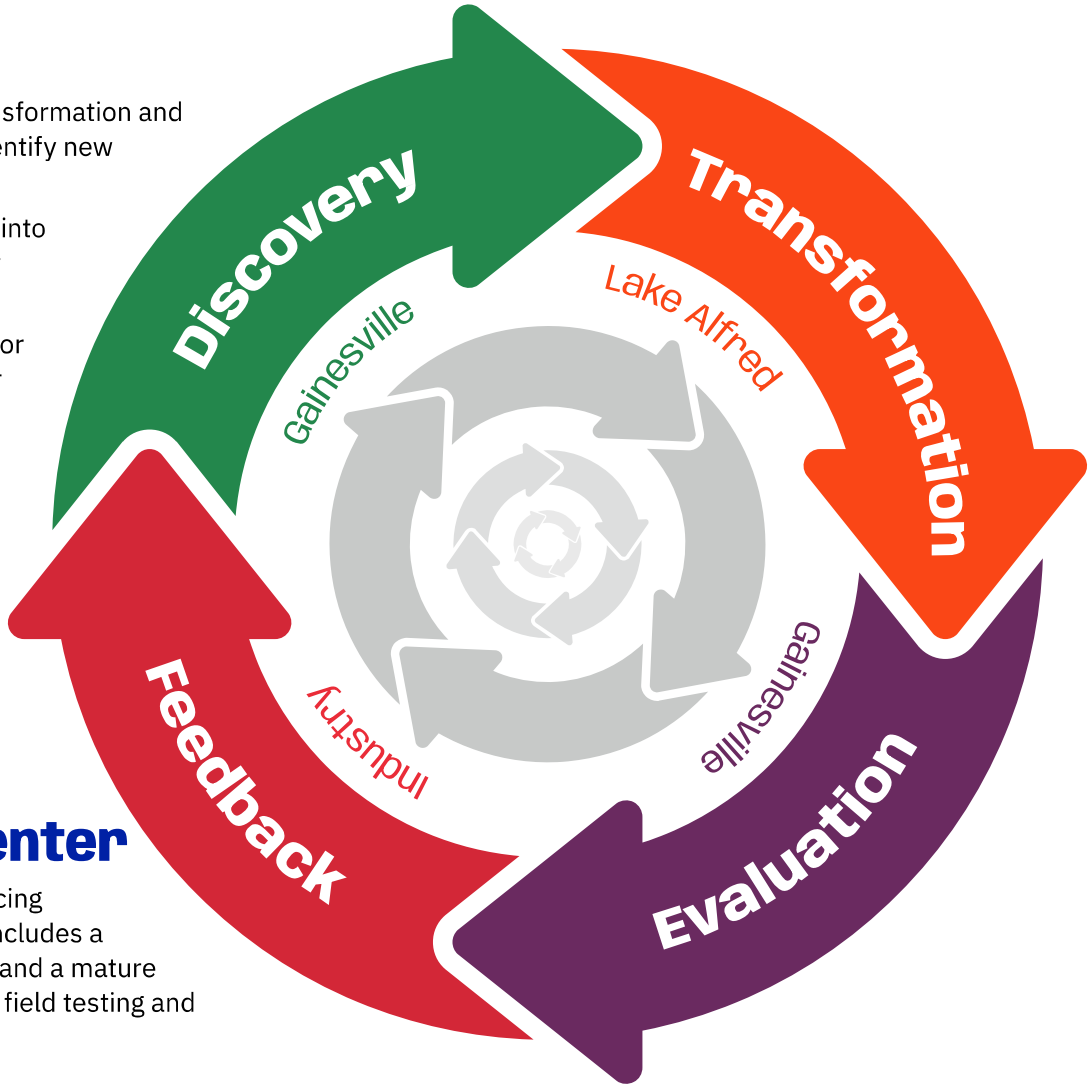
A cycle for success:

DISCOVERY: Scientists identify promising genes and methods for transformation and gene editing. CTC scientists bring together specialized expertise to identify new gene targets for editing.

TRANSFORMATION: Citrus gene targets of interest are introduced into citrus plants at a specialized juvenile transformation facility located at CREC, where young plants are cultivated.

EVALUATION: The transformed plants are transferred to Gainesville for accelerated growth and preliminary testing, then returned to CREC for evaluation in regulated field sites under expert oversight.

FEEDBACK: Scientists analyze results, share findings with growers, and use the feedback to inform the next cycle of innovation.



Crop Transformation Center

The goal of the UF/IFAS CTC is to accelerate genetic gain for citrus and specialty crops to improve human and environmental health. The center was founded in 2023 to address the need for rapid development and commercialization of genetically improved crops.

croptransformation.ifas.ufl.edu

Citrus Research and Education Center

The CREC is home to two citrus transformation labs that have been producing genetically modified citrus plants for researchers for over 20 years. This includes a juvenile tissue transformation lab for quick screening of new gene targets and a mature tissue transformation lab to produce genetically modified citrus plants for field testing and potential release to the Florida citrus industry.

crec.ifas.ufl.edu

While the process can vary, this workflow demonstrates how the CTC and CREC combine their strengths to move solutions from the lab to the grove.