

# Core Technologies:

State-of-the-Art Instrumentation and Expertise to Accelerate Crop Improvement



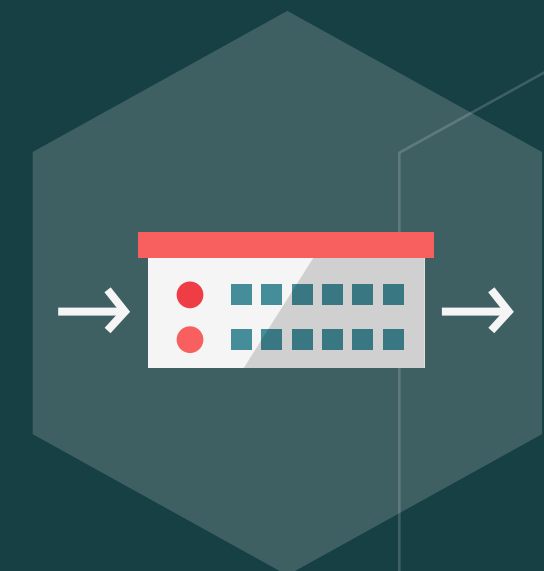
## Bellwether Foundation Plant Phenotyping

Integrates high-throughput robotics, imaging, computer vision and analytic technologies of up to 1,140 plants in a custom platform to identify the key traits that affect plant productivity and resilience to environmental stress.



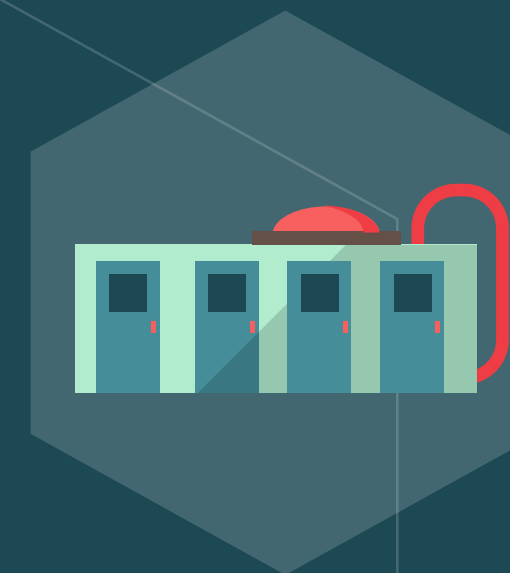
## Integrated Microscopy

Provides high resolution imaging with both confocal and electron microscopes analysis of cell biology, critical for understanding how proteins work within the community of molecules contained in plant cells.



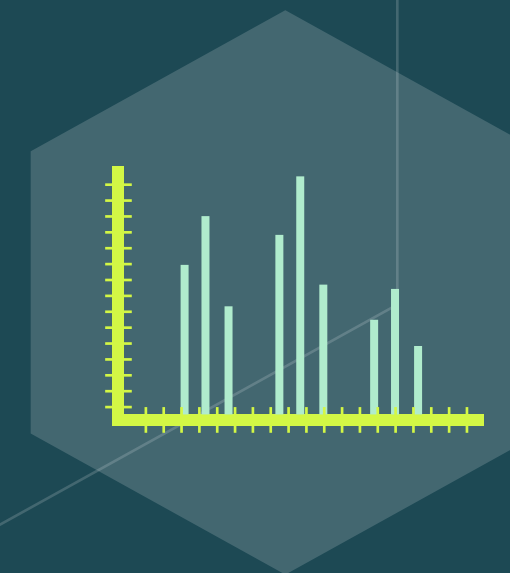
## Bioinformatics Core

Consists of 1,300 processors, 8 terabytes of memory and 288 terabytes of storage providing the essential horsepower to analyze vast amounts of information — big data — critical to understanding genome function in plants.



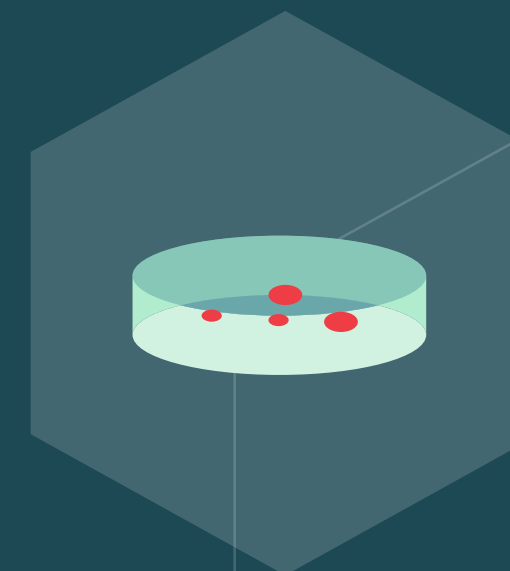
## Plant Growth

Manages over 100 species in 47,530 sq.ft. of greenhouse space, 18 walk-in growth chambers, 33 reach-in growth rooms, along with expert plant care for 20+ Danforth labs internally and 15 external organizations' plants.



## Proteomics & Mass Spectrometry

Collaborates with researchers from academia and industry to facilitate the exploration of complex biological systems through qualitative/quantitative proteomics and metabolomics analysis, and high-quality biomolecule analyses, producing first-rate publication quality results.



## Tissue Culture & Transformation

Utilizes an array of in vitro cell and tissue culture systems to transform 13 crop and model plant systems.