

CASE STUDY: AMFORA**Efficiently Testing Novel
Composition Traits in Soybeans****OVERVIEW**

Amfora is an agricultural company fueling the plant-based protein revolution by applying its patented gene editing technology to create plant-based replacements for animal protein and increasing the protein content of staple food crops.

The company is focused on enhancing the nutritional profile of crops vital to global food security. This includes optimizing the amino acid profile of plant-based proteins, modifying carbohydrates to reduce their effect on serum glucose, and enhancing micronutrients.

Amfora raised venture capital from Spruce Capital Partners, Leaps by Bayer, and BayWa AG.

CHALLENGE

Amfora was seeking a partner to deliver T1 seeds for multiple novel Amfora vectors, as well as the grow out of subsequent generations with molecular and compositional analyses.

SOLUTION

Leveraging its Plant Pipeline as a Service™ platform, Solis used Agrobacterium-mediated transformation to introduce Amfora's candidate traits into the nuclear genome of soybean.

From a library of Amfora vectors, Solis delivered up to 12 confirmed transgenic soybean lines per vector. Plants were maintained through the collection of T1 seeds from greenhouse grown T0 plants. Solis maintained a secure electronic database for electronic tracking of individual plants for all Amfora vectors,

SOLIS' SERVICES

- Generation of transgenic soybean plants using the Solis Plant Pipeline as a Service™
- Plant tissue sampling
- Molecular characterization
- Greenhouse grow out
- Compositional phenotyping



Solis' Plant Pipeline as a Service is the best integrated resource imaginable for gene editing, plant transformation, plant analysis, and greenhouse operation.

Working with Solis is like having our own in-house team to manage our pipeline. They are great partners dedicated to our success.



Michael Lassner, PhD
Chief Scientific Officer
at Amfora

ensured proper segregation from other transgenic events, and good stewardship of Amfora plants.

The deliverable for this engagement was T1 seed packed and delivered to Amfora. Additionally, Solis has grown T2 plants, facilitated molecular and phenotypic analyses and delivered T3 seeds.

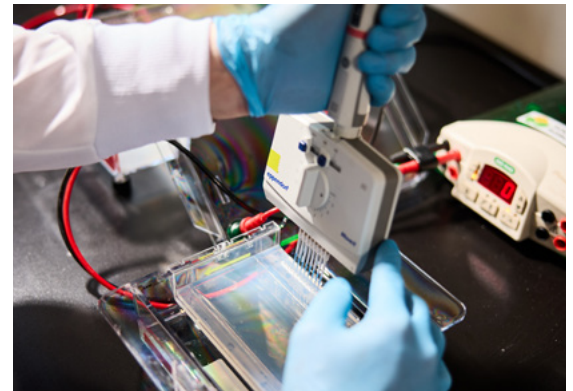
RESULTS

Amfora received a favorable USDA determination of unregulated status for its gene-edited soybeans using plants and data provided through its Solis collaboration.

NEXT STEPS

Based on the successful initial engagement, Amfora continues to use Solis' Plant Pipeline as a Service™ platform for generation of transgenic plants from Amfora's novel candidate pipeline. Amfora plans to use Solis to facilitate selection of lead events for commercialization. As a multi-year customer, Amfora efficiently advances its trait pipeline while maintaining virtual operations, avoiding the capital investment required for laboratories, greenhouses, and associated staff and equipment.

As Amfora traits progress through the Solis platform, phenotyping services available through Solis can facilitate Amfora's prioritization of candidates.



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