UCDAVIS Plant Breeding Center

The Student Farm — For a More Sustainable Agriculture

Student Collaborative Organic Plant Breeding Education

The Lima Bean Project

The SCOPE Lima bean team is focused on developing large-seeded, bush-type Limas with resistance to Lygus hesperus. Lygus is the most damaging insect pest for Lima bean (Phaseolus lunatus) in California. Yield losses attributable to Lygus feeding on flowers and young pods in unsprayed fields has been as high as 70% compared to insecticide treated fields. The necessity of insecticides prevents cultivation of P. lunatus within organic cropping systems. With Lygus resistance, Limas could have great potential as a nitrogen fixing rotational crop for organic growers. Within the genepool of elite California varieties, some lines of Lima bean are more resistant to Lygus than others, and there appear to be multiple mechanisms of resistance. We hope to add to this genetic resistance by diversifying the genepool with American heirloom varieties and germplasm from Centro Internacional de Agricultura Tropical. It will take approximately 4 years until public release from this project.

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: asaichaie@ucdavis.edu.

For more information on the projects, visit: plantbreeding.ucdavis.edu