



Leah McHale

Project Title

Soybean Cultivar Development

Biography

Dr. McHale received her BS in Horticulture from Pennsylvania State University and her PhD in Plant Biology from the University of California, Davis. Her post-doctoral work at UC Davis and the breeding company Rijk Zwaan focused on the utilization of genomic tools to facilitate plant breeding programs. In 2009, she moved to the Ohio State University as an Assistant Professor in the Department of Horticulture and Crop Science.

Project Description

The ongoing soybean research in the McHale lab contributes to the applied goal of new cultivar development. The OSU soybean breeding program focuses on development of soybean cultivars and germplasm which are well adapted to the Ohio and North-Central growing regions.

Breeding goals include resistance to pests and pathogens important in Ohio and the North-Central region (e.g. *Phytophthora sojae*, soybean aphid, and SCN), improved quality traits important in the specialty food-grade soybean market, added value traits such as high oleic acid, as well as environmental stability of each of the aforementioned traits. To assist the breeding program, the McHale lab also aims to identify the specific genes which control these complex traits of interest. For resistance to *Phytophthora sojae*, one of the approaches being implemented is to identify networks of interacting genes involved in the resistance response to *P. sojae* and identify the chromosomal region(s) responsible for the control of these networks.

