Robotic and Precision Agriculture Research for Florida Specialty Crops

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Contemporary technology and management has aided the competitiveness of USA agronomic crops. However, less support has been provided for specialty crops, such as fruits and vegetables. "Robotic and Precision Agriculture Research for Florida Specialty Crops" will describe some of the research conducted and proposed at the University of Florida to aid Florida specialty crops, such as citrus and watermelon.

The presentation reviews the author's earlier work in farm machinery automation and precision agriculture for grain crops. It then discusses some experiences and current thoughts about bringing similar technologies to specialty crops. Yield mapping, variable rate application, selective mechanical harvesting, and mechanical weed control may be appropriate technologies for these crops. The importance of properly responding to spatial and temporal variations is emphasized. This includes proper technical understandings of accuracy and dynamic response issues. Robotics and precision agriculture have the potential to reduce costs, improve product quality, and reduce environmental impacts.