

Tree Fruit Extension Economics Research Highlight

Precision Ag Technologies and the US Apple Industry

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Precision agriculture technologies (e.g., yield monitors, global positioning satellite technology, soil sensing, crop sensing, data analytics, etc.) have been successfully applied to a number of U.S. crop production systems. Yet, the adoption of precision agriculture technologies has been slow for many specialty crops including apples, despite commercial firms recognizing that these technologies have promising implications. We surveyed apple growers in Washington, New York, and Michigan on the use of precision agriculture technologies with the goal to help researchers and extension educators to develop strategies that would accelerate adoption. Major challenges affecting the United States apple industry were related to labor and weather. Surveyed growers were cognizant that precision agriculture technologies offer solutions to tackle these challenges from orchard establishment to crop production and protection from pests and diseases. Despite the current low level of adoption, growers strongly support research and extension activities that address labor-related and weather-related challenges. Such activities also address major concerns on the reliability or quality of the technology and the costs of service. Adoption barriers are economies of size that could be minimized with rental options along with customized services. Finally, apple growers are aware of the importance of collaborating with agriculture service companies and academic institutions to adapt technologies to their specific needs.

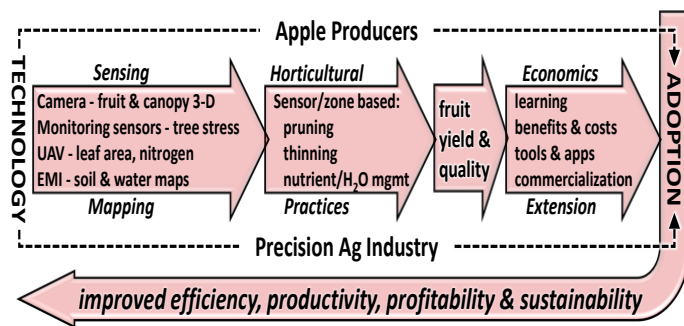


Figure 1. Adoption of precision ag technologies - Author: David Brown.

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