UF/IFAS Citrus Mechanical Harvesting & Abscission Program Website

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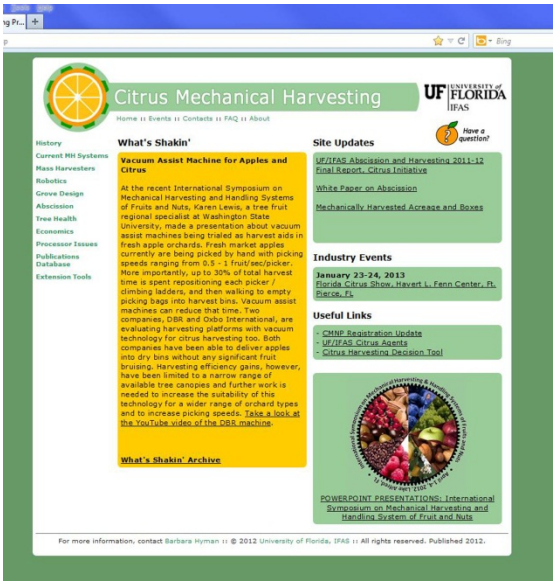

Introduction

Scientists with the University of Florida/Institute of Food and Agricultural Sciences (IFAS) have been conducting research on citrus mechanical harvesting systems since the early 1960s. More recently, IFAS scientists has focused on abscission management, tree health studies, and economic viability of the commercial systems. In 2005, the Florida legislature allocated $1.25M as part of the “Emerging Citrus Industry Technology Initiative” to fund mechanical harvesting research and educational efforts.

A website [http://citrusmh.ifas.ufl.edu] has been developed to serve as a hub for all available information on citrus mechanical harvesting -- a place where growers,

harvesting contractors, processors, and other industry clientele can access the latest research material, acquire information on existing harvesting systems, and provide a forum to ask questions regarding mechanical harvesting. From the home page one can navigate to program topics, special interest pages, and news features.

Program Topics. Seven (7) program areas comprise the UF/IFAS efforts into citrus mechanical harvesting. The program areas are listed below along with the UF/IFAS faculty and office location who have contributed information.

1. Mass Harvesters. Reza Ehsani, agricultural engineer, CREC.

   Won Suk Lee, agricultural engineer, UF.

2. Robotics. Tom Burks, agricultural engineer, ABE.
3. Grove Design. Bill Castle, horticulturalist, CREC. Retired on emeritus status.

   Robert Rouse, horticulturalist, SWFREC.

4. Abscission. Jackie Burns, post harvest horticulturalist, CREC.

   Robert Ebel, horticultural physiologist, SWFREC.

5. Tree Health. Kelly Morgan, soil scientist, SWFREC.

   Jim Syvertsen, horticulturalist, CREC. Retired.

6. Economics. Fritz Roka, economist and program leader, SWFREC.
7. Processor Issues. Michelle Danyluk, food scientist, CREC.

   Tim Spann, horticulturalist, CREC. Current location: San Diego, CA.

Abbreviations:
CREC – Citrus Research & Education Center, Lake Alfred, FL.
ABE – Agricultural Biological and Engineering, Gainesville, FL.
SWFREC – Southwest Research & Education Center, Immokalee, FL.
USDA – United States Department of Agriculture
UF-IFAS - University of Florida, Institute of Food and Agricultural Sciences
FDOC – Florida Department of Citrus

The program areas reflect the input from the Florida Department of Citrus (FDOC) Harvest Research Advisory Council and the Mechanical Harvesting Advisory Committee of Southwest Florida. Each research area has a dedicated website page where you can find the archived annual reports that describe research and extension activities for the periods 2007-2012.

Special interest Pages.

History. Development of mechanical harvesting equipment and systems have a history dating back to the 1950s. Emeritus professor, Dr. Jodie Whitney, amassed an extensive catalog of photos and more than five (5) linear miles of 16mm film. A sample of these photos and film have been digitized and included along with a written record by Dr. Whitney that describes how harvesting equipment has evolved from the early

USDA/DOC/UF-IFAS research efforts to the machinery available for today's commercial harvest.

Publication Database. More than 350 publications related to citrus mechanical harvesting are available in the publication database. These publications can be downloaded and viewed online or printed. One can search for publications by author, category (research or extension), year, journal name, or keyword. For example, if you are looking for an article on abscission you can search by using the keyword "abscission", look for a specific researcher who is doing abscission work, or look within a specific journal such as "HortScience".

Extension Tools- Several audio visual tools are available here that can be viewed and downloaded. There are Powerpoints, videos, brochures, posters and photos available. The videos that were developed by the citrus mechanical harvesting program demonstrate how the different systems work in a commercial grove setting. The photographs show many of the citrus mechanical harvesting systems that have been tested. Some were never used commercially due to design flaws. Two RLOs (Reusable Learning Object) have been developed to describe available harvesting systems and basic concepts of abscission. The materials in each subject area contain a variety of different audio/visual aids. For example, you will find two in the Extension Tools: RLOs library: "Citrus Mechanical Harvesters" and "Abscission and Its Use with Citrus Mechanical Harvesters."

News Features.

Site Updates – On the homepage, links to the most current information and documents that have been added to the website can be found. For instance, this is where you can find the annual summary of acreage and boxes mechanically harvested during the prior season.

Industry Events- This section describes events around the state of Florida that we are actively participating in and where you can obtain information on citrus mechanical harvesting by exhibitors or seminar speakers.

What's Shakin- An update on what is currently happening in the citrus industry to aid and promote mechanical harvesting and abscission.

Useful Links- Links to other websites (educational or industry) that we feel will help provide you with additional pertinent information on citrus and mechanical harvesting.

Have a Question- This is a link that will send an email to our educational coordinator, Barbara Hyman, hymanb@ufl.edu or call at (239) 658-3400. Your request will be promptly relayed to a team faculty member who is best suited to address your question.

If you would like to learn more about citrus mechanical harvesting please visit the website at http://citrusmh.ifas.ufl.edu.