

Florida Department of Citrus Product Research Committee



Florida Citrus Commission Meeting
January 16, 2008



Citrus Harvesting Research Advisory Council

Tuesday, January 15, 2008



Key Agenda Items

- Dr. Jackie Burns (IFAS/CREC)– CMNP Abscission and Harvesting Trials – Parson Brown fruit
- Dr. Bob Ebel – (IFAS/SWFREC) - CMNP Abscission and Harvesting Trials –
- Dr. Tim Spann – (IFAS/CREC)– CMNP Abscission and Mechanical Harvesting – Impact on 'Trash' associated with harvesting
- Taw Richardson – AgroSource – Report on CMNP Registration

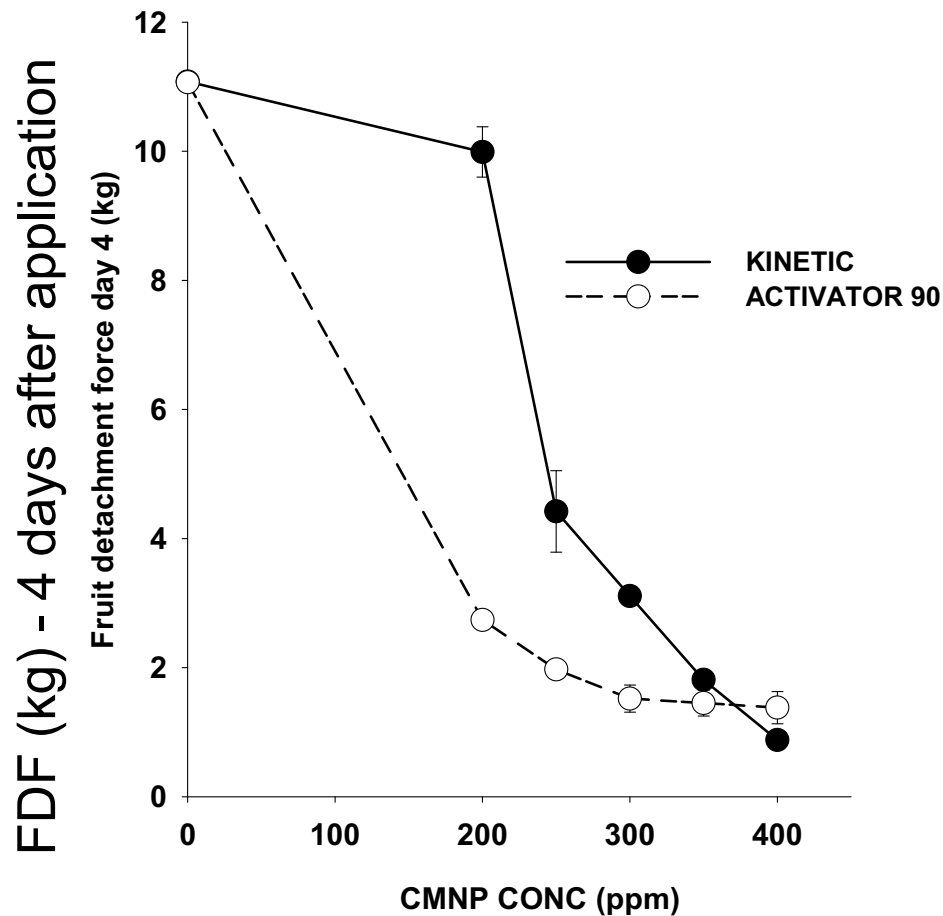


Dr. Jackie Burns (IFAS/CREC)–

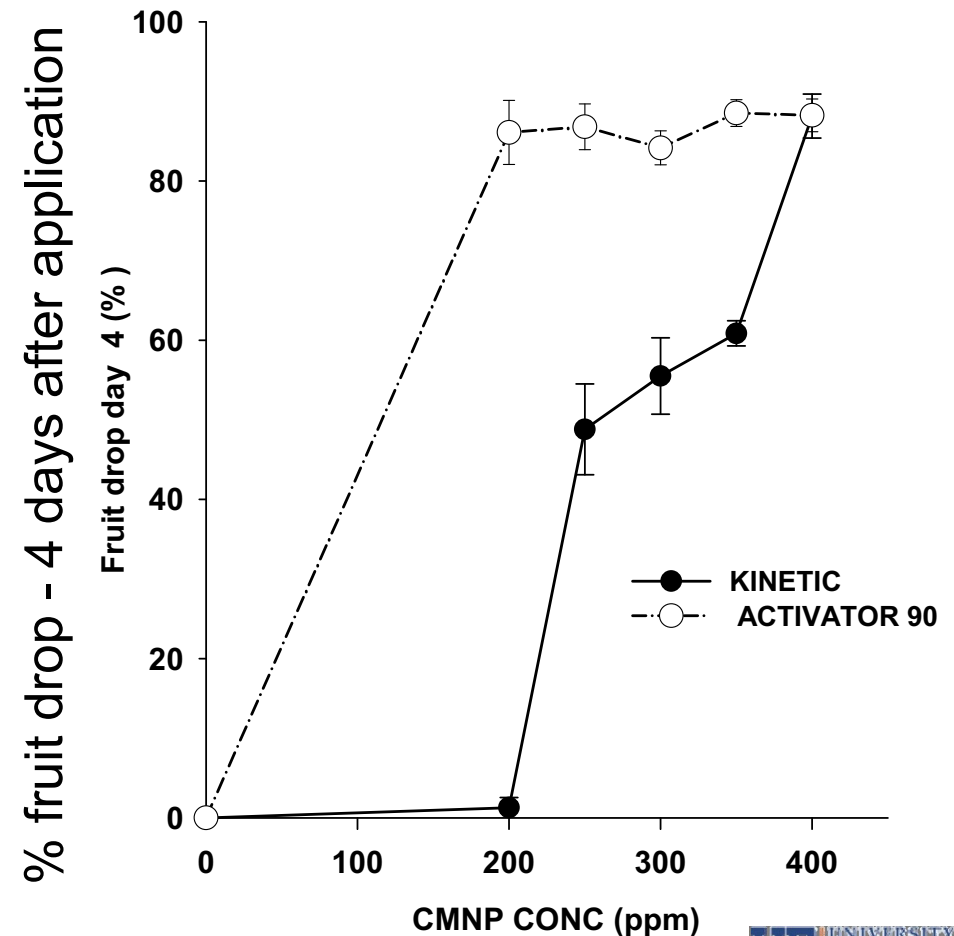
Parson Brown branch tests - effect of adjuvant and CMNP conc.

Adjuvants are being studied to determine their ability to provide wetting, more uniform distribution, and increased retention of CMNP treatment

Effect of CMNP concentration (ppm) and the adjuvants Kinetic and Activator 90 in reducing fruit detachment force of Parson Brown orange. Lake Wales, Florida.
Application: November 26; Evaluation: November 30, 2007



Effect of CMNP concentration (ppm) and the adjuvants Kinetic and Activator 90 on fruit drop (%) of Parson Brown oranges. Lake Wales, Florida. Appl: Nov 26; Eval: Nov 30, 2007



FDF = Fruit Detachment Force

Dr. Jackie Burns (IFAS/CREC)–

Parson Brown harvesting trial -Camp Mack, Lake Wales

Dec 7, 2007

	<u>% removal</u>	<i>Uniform trees, avg 14.5' ht in test blocks</i>
270 cpm	96.8	
270 cpm + CMNP	98.1	<i>0.1% activator-90</i>

Jan 11, 2008

	<u>% drop</u>	<u>% removal (incl drop)</u>	<u>% drop (adjust)</u>	<u>% removal (no drop)</u>
230 cpm + CMNP	5.6	93.2	4.5	89.3
270 cpm + CMNP	5.9	93.6	4.8	90.1
230 cpm	3.4	89.4	1.0	86.9
270 cpm	3.9	89.6	1.2	86.8

Non-uniform, ranging from 10 to 18' ht in test blocks

CPM = cycles per minute



‘Hamlin’ Mechanical Harvesting Trials

Objectives

1. Evaluate CMNP and mechanical harvesting on mid season ‘Hamlin’
2. Evaluate long-term effects of CMNP and mechanical harvesting on mid season ‘Hamlin’
3. Evaluate effect of drought stress, CMNP and mechanical harvesting on late season ‘Hamlin’



**Can we model effect of temperature
on decline in Fruit Detachment Force (FDF) by CMNP?**

Introduction

**Based on previous work we know that temperature has a
very large effect on decline in FDF by CMNP**

Approach

- Build data base with air temperature, CMNP
concentration, and FDF**
- Develop and test mathematical models that predict FDF
at harvest based on CMNP concentration and air
temperature**

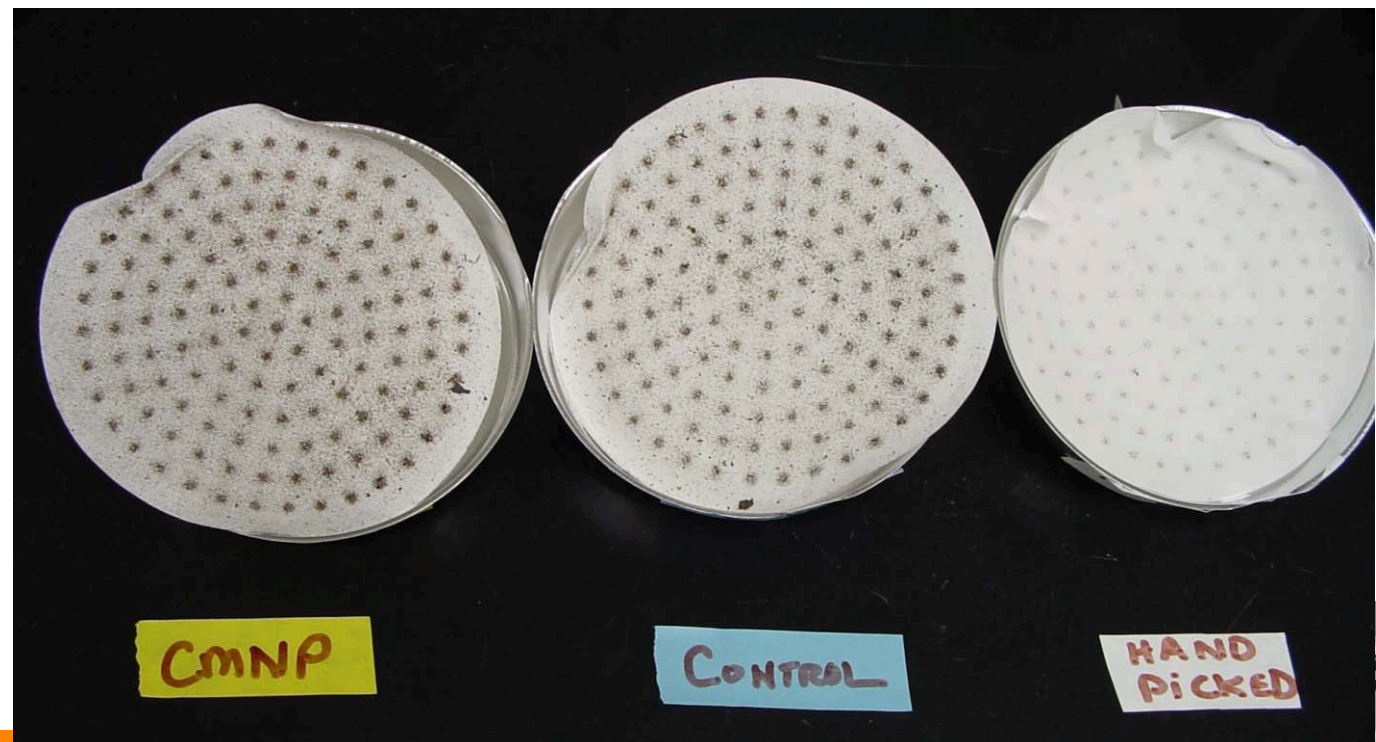
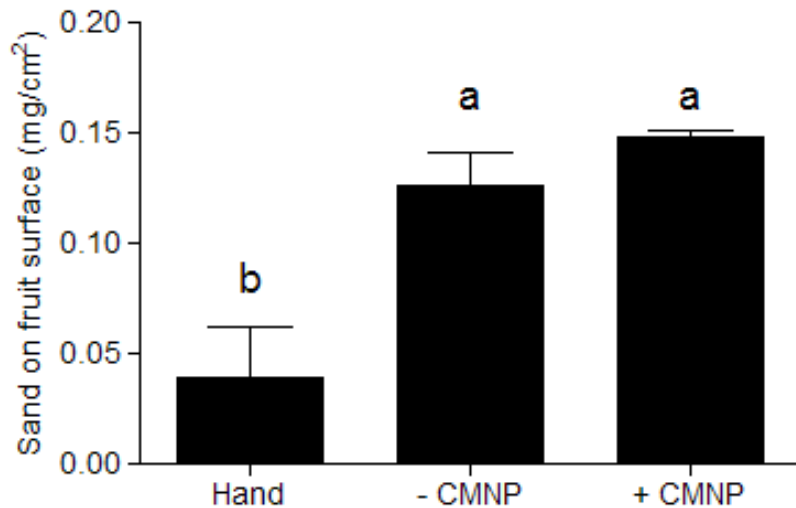


Effects of CMNP on debris in Parson Brown Oranges - Preliminary results

Tim Spann
&
Michelle Danyluk



Trial 1: Sand accumulation on fruit surface



Trial 2: January 11, 2008

Debris in loads of hand and mechanically harvested 'Parson Brown' oranges with and without application of CMNP abscission agent (all data expressed as fresh weight debris in oz / lb fruit).

Treatment	Leaves	Small stems	Large stems	Total	Loose debris	Adherent debris
Hand	0.025bc	0.014b	0.000	146.3	0.015b	0.025c
+ CMNP 230 CPM	0.025bc	0.016b	0.001	157.5	0.017b	0.025c
+ CMNP 270 CPM	0.023c	0.013b	0.001	138.8	0.021b	0.016c
- CMNP 230 CPM	0.064a	0.038a	0.009	416.3	0.047a	0.064a
- CMNP 270 CPM	0.041b	0.027ab	0.000	255.0	0.023b	0.045b



CMNP REGISTRATION ACCOMPLISHMENTS & ISSUES

- Regulatory
- Chemistry
- Metabolism
- Residue
- Toxicology
- Environmental Fate
- Wildlife & Aquatic Organisms
- Efficacy & Phytotoxicity
- Inventory Management
- Document Management
- Study Management
- Timelines & Budget



FUTURE WORK

- Chemistry
- Toxicology
- Metabolism
- Environmental Fate
- Wildlife & Aquatic Organisms
- Formulation
- Re-entry
- Spray Drift
- Plant Protection
- Higher Tier Studies-TBD

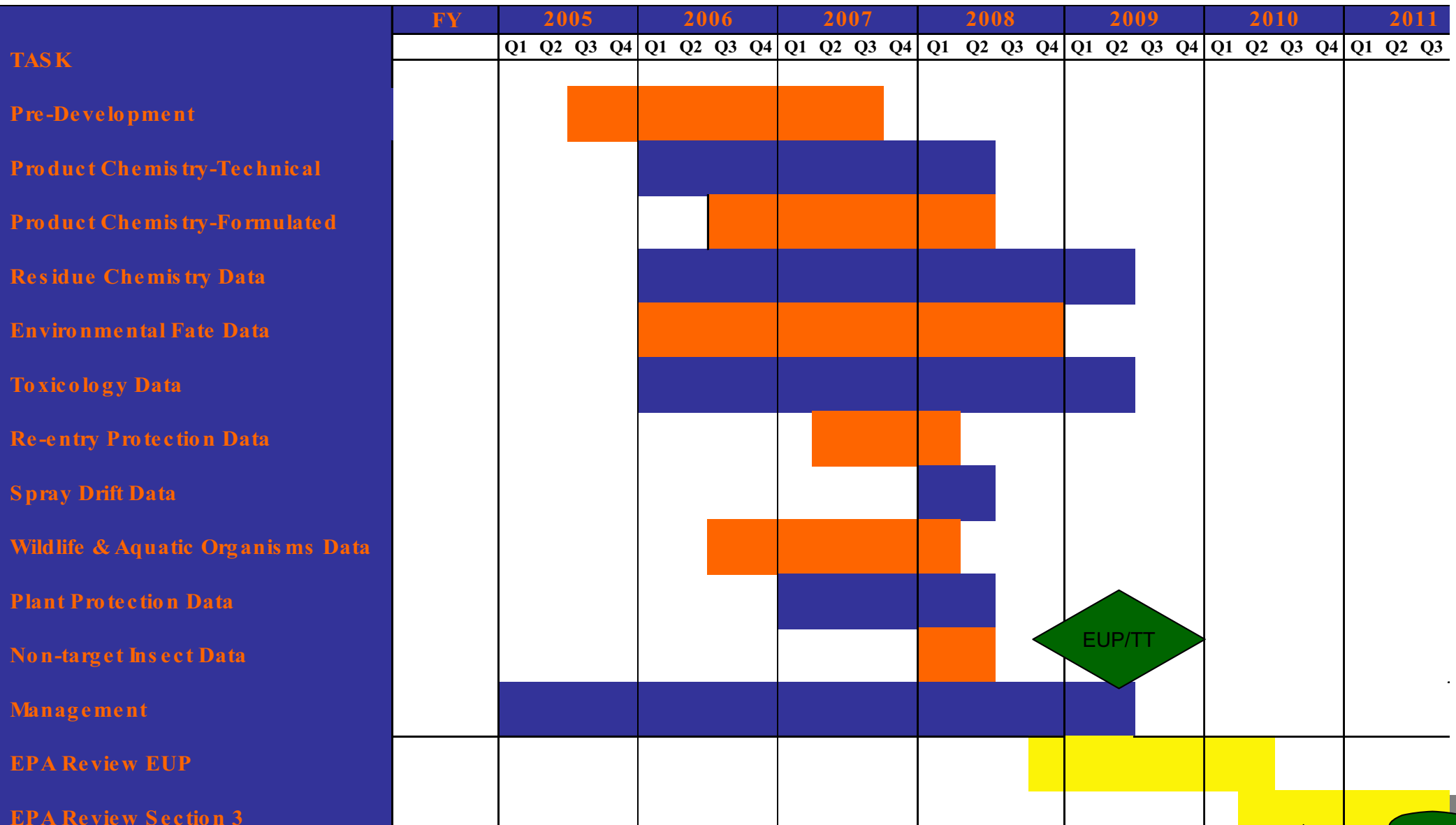


STATUS

- Project well aligned to advance
- No major changes to timelines or budget
 - Prepared budget adjustments as necessary
 - EUP/TT tracking as scheduled
 - Timelines very tight
 - 90% of studies completed or on track for EUP submission
 - Metabolism, Residue & Environmental Fate are critical path areas
 - Section 3 registration critical path limitations
 - Additional research required to guide critical studies
 - Adds 6-12 months to submission timing



ABSCISSION AGENT (CMNP) REGISTRATION TIMELINE



EUP/TT

TIMELINE – KEY DATES

- Experimental Use Permit – EUP
 - Submission summer of 2008 (Qtr 3)
 - EPA has 18 months to decide – Qtr 4 '09/Qtr 1 '10
 - Research continues through period
 - Up to 25,000 acres treatable with EUP
- Section 3 – 'Full Registration'
 - Based upon combination of EUP data and 'long term' further study data
 - Submission Qtr 2-3 of 2010
 - EPA has two years to decide – Qtr 2-3 of 2012

