

Tehama County Orchard Crop UCCE Program

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Primary Orchard Production Tehama 2012

| | | | |
|-------------------|-----|-----------|---------------------|
| Walnut | 50% | 21,753 Ac | \$103,415,100 |
| Almond | 13% | 9,396 Ac | \$27,666,500 |
| Prune | 13% | 8,014 Ac | \$27,606,400 |
| Olive (Tbl & Oil) | 18% | 9,696 Ac | <u>\$43,325,900</u> |
| | | | \$200,000,000 |

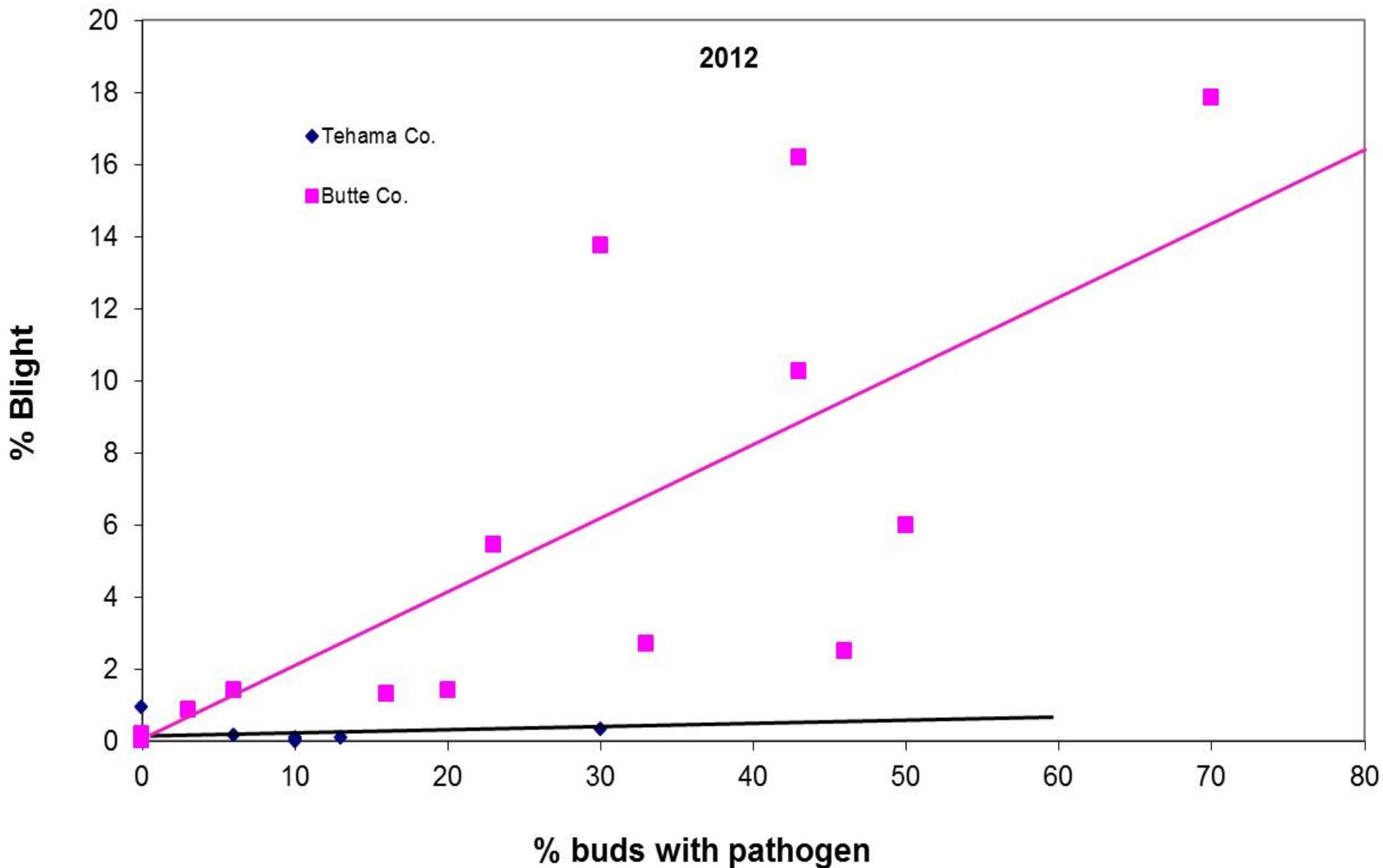
2012 Tehama County Crop Report

Projects to Help Tehama County Orchard Farmers

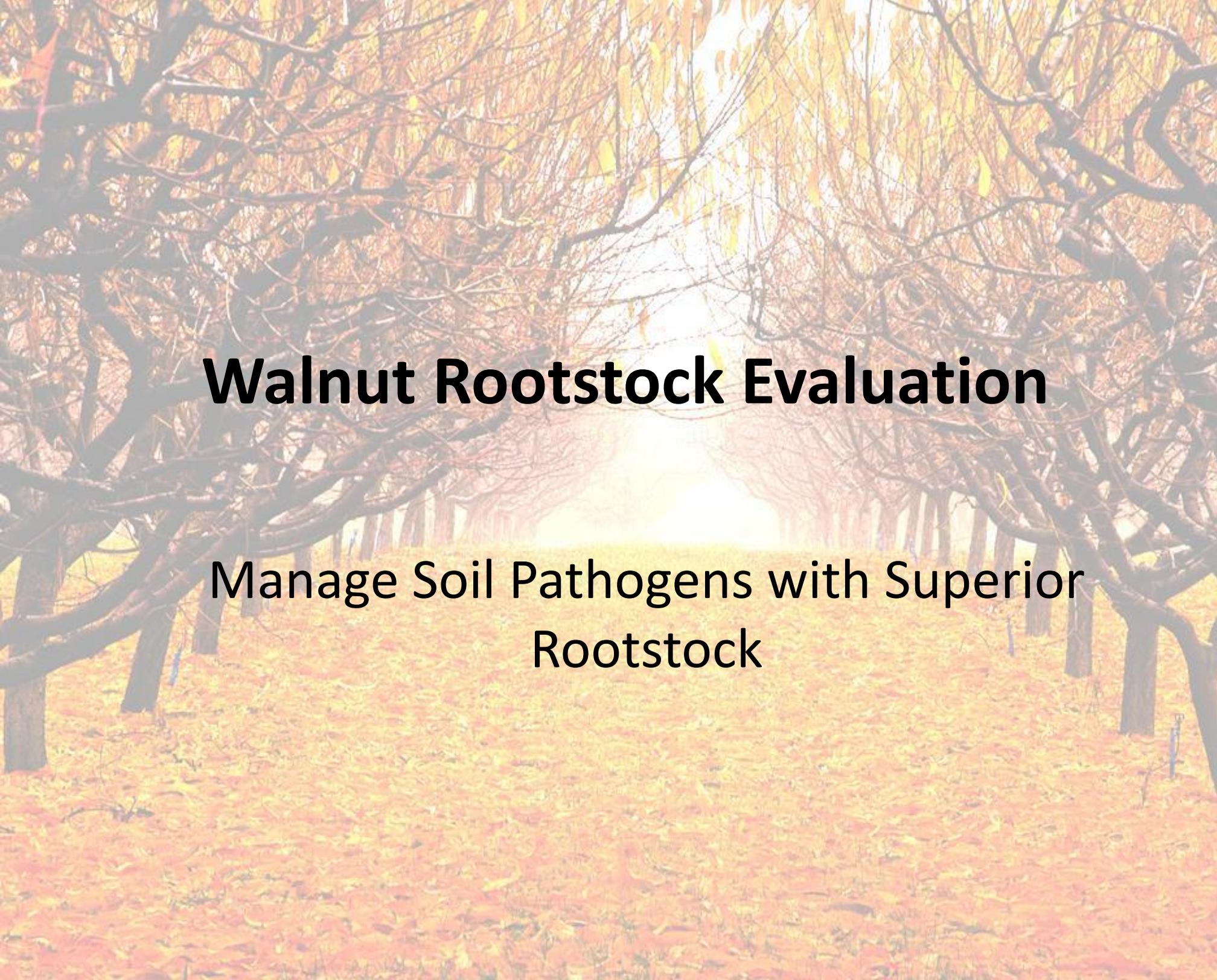
- ❖ Walnut Blight
- ❖ Walnut Rootstock Evaluation
- ❖ Codling Moth Mating Disruption
- ❖ Prune Rootstock Evaluation
- ❖ Integrated Pest Management
- ❖ Newsletters and Grower Meetings to Extend Information

Walnut Blight infestation in Northern California
Xanthomonas arboricola pv *juglandis*





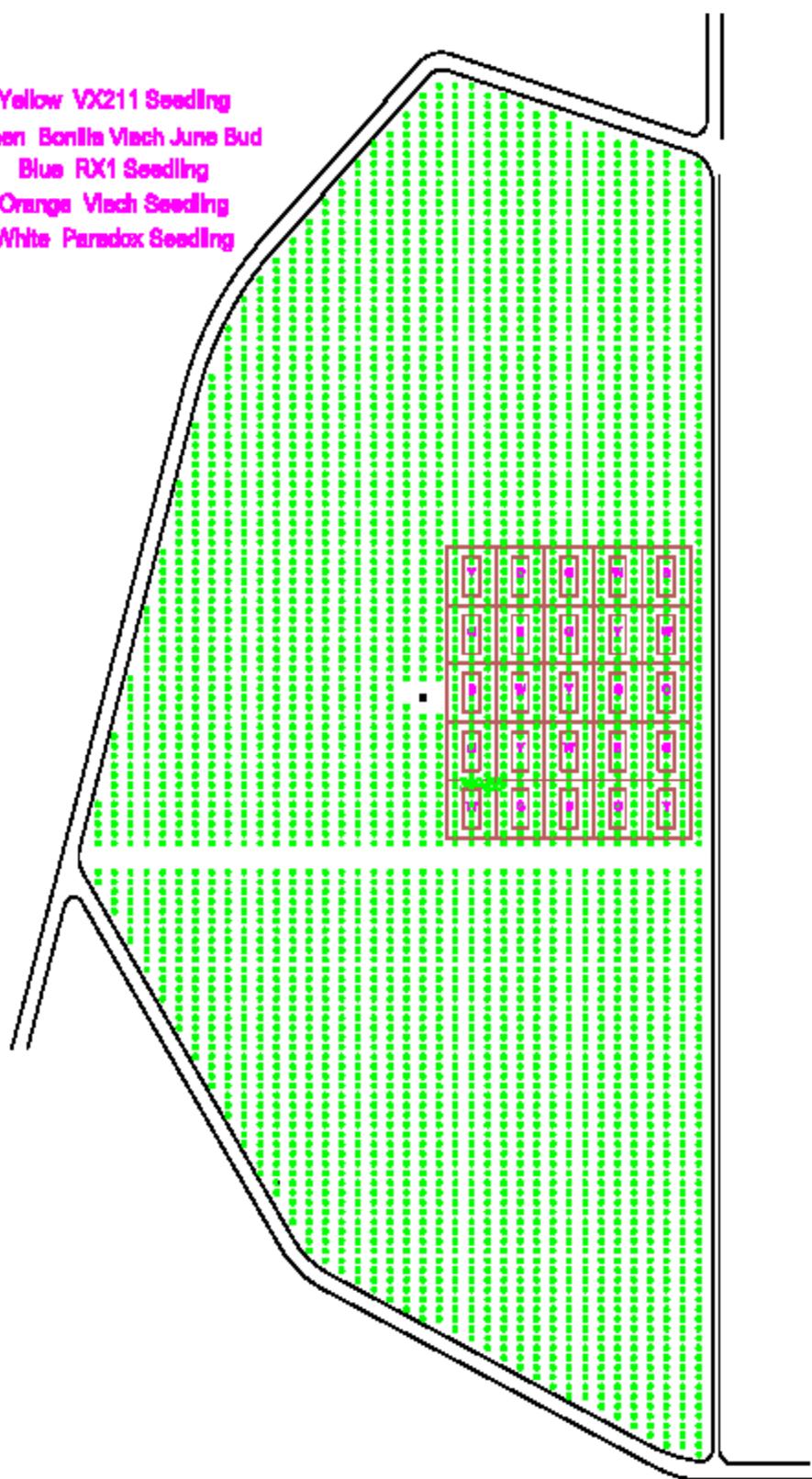
Relationship between the % buds infested with pathogen and the % walnut blight damage for 30 orchards in Butte and Tehama counties for 2012. The lines drawn represent the linear regression $Y=0.218x - 0.28$ ($R^2=0.56$); and $Y=0.001x + 0.14$ ($R^2=0.001$) for orchards in Butte and Tehama counties, respectively.



Walnut Rootstock Evaluation

**Manage Soil Pathogens with Superior
Rootstock**

- Yellow VX211 Seedling
- Green Bonita Vlach June Bud
- Blue RX1 Seedling
- Orange Vlach Seedling
- White Paradox Seedling





Bonilla
Vlach

RX1

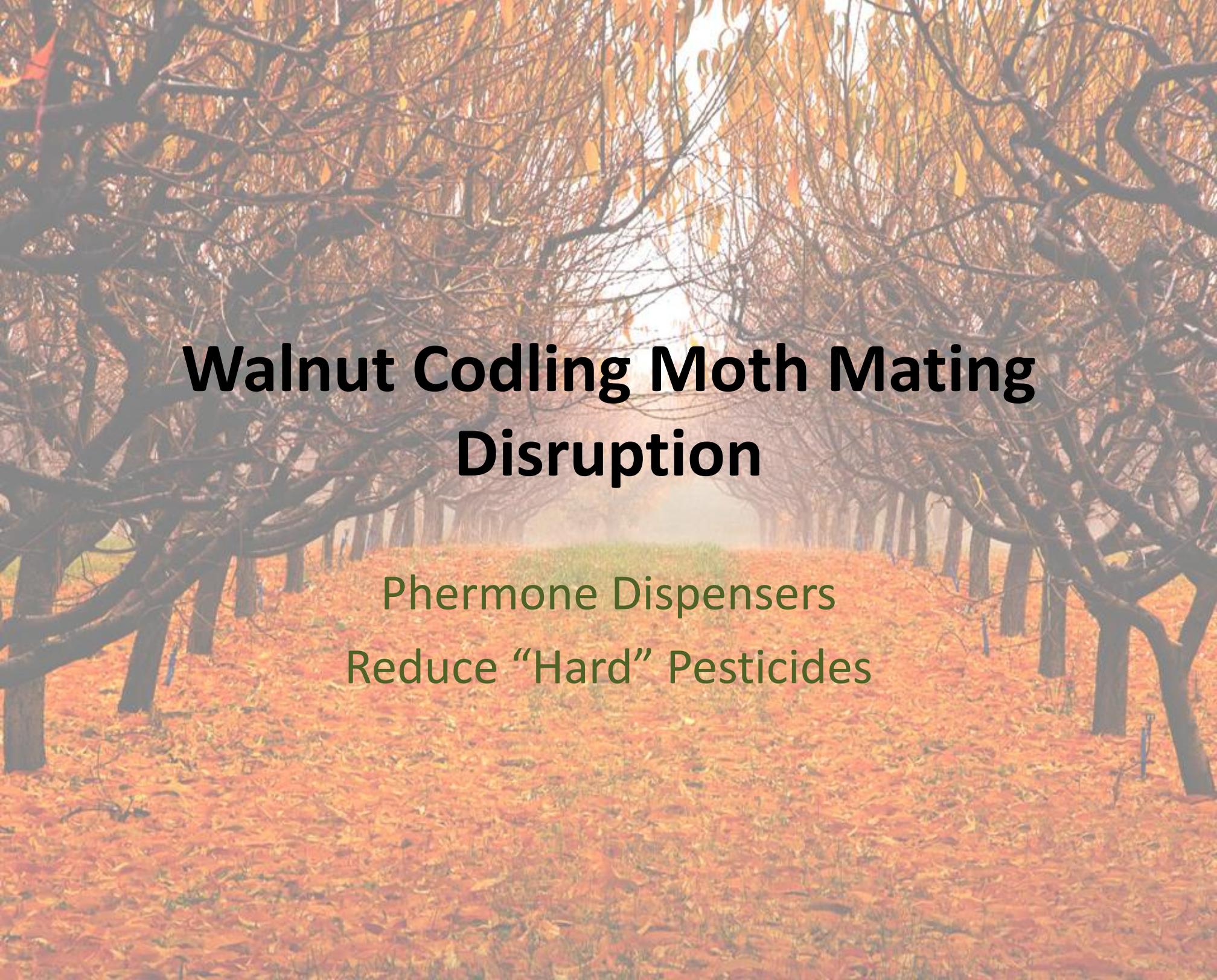
Paradox

Vlach

VX211

| Rootstock | Average Scion Circumference (cm) | | | Growth Change (cm) |
|-------------------------|---|-----------------|-----------------|-----------------------------|
| | 5/16/11 | 11/16/11 | 11/15/12 | 11/16/11 to 11/15/12 |
| VX211 | 7.61 | 15.23 | 23.34 | 8.11 |
| June Bud/Vlach | 19.04 | 27.22 | 37.08 | 9.86 |
| RX1 | 7.60 | 14.96 | 24.39 | 9.43 |
| Vlach | 7.69 | 15.10 | 25.00 | 9.90 |
| Paradox Seedling | 7.59 | 14.81 | 23.99 | 9.18 |

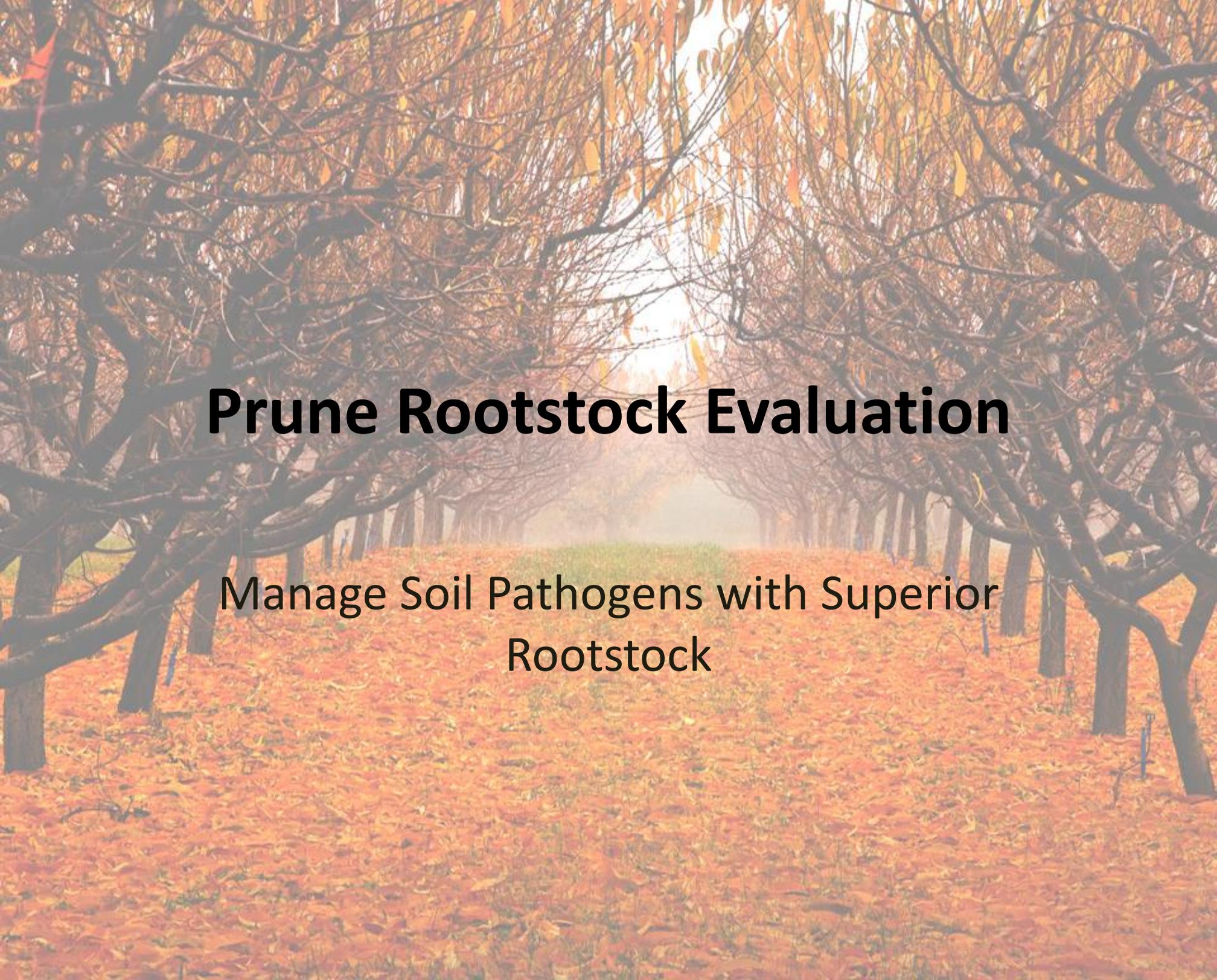
Table 3. 2011 and 2012 Scion circumference measurements in centimeters (cm) for the Tehama County clonal walnut rootstock experiment. Trees were planted 3/12/09 and field budded to Howard September 11, 2009. All buds failed due to cold injury and trees were whip grafted to Howard 5/1/2010. Scion measurements were taken on 5/16/11, 11/16/11 and 11/15/12. June bud/Vlach trees were nursery grafted giving them a size advantage over the field grafted trees.



Walnut Codling Moth Mating Disruption

Phermone Dispensers
Reduce “Hard” Pesticides





Prune Rootstock Evaluation

Manage Soil Pathogens with Superior
Rootstock

Tehama First Planting – 4/28/11

| Rootstock | Number of Replicates (# trees) | Average Circumference (cm) 3/5/12 / 11/26/12 | Circumference Change (cm) |
|------------|--------------------------------|---|---------------------------|
| Myrobalan | 4 (18) | 5.48 / 10/94 | 5.51 |
| Myro 29C | 4 (21) | 7.14 / 14.26 | 7.12 |
| M2624 | 5 (25) | 5.32 / 10.44 | 5.12 |
| Lovell | 1 (3) | 5.40 / 11.33 | 5.93 |
| M40 | 4 (18) | 5.67 / 11.13 | 5.46 |
| M30 | 4 (16) | 6.13 / 12/02 | 5.89 |
| M58 | 4 (17) | 5.15 / 9.68 | 4.53 |
| HBOK 50 | 5 (28) | 4.93 / 8/41 | 3.48 |
| Empyrean 2 | 4 (15) | 4.68 / 8.41 | 3.48 |
| Citation | 5 (20) | 4.88 / 8.73 | 3.85 |
| Krymsk 86 | 4 (17) | 5.48 / 9.74 | 4.26 |
| Krymsk 1 | 4 (23) | 5.67 / 10.61 | 4.94 |
| Rootpac | To Yuba | - | - |
| Viking | 2/10/12 | - | - |
| Atlas | 2/10/12 | - | - |

Tehama prune rootstock plot grafted to Improved French variety. Planted 4/28/11 and measured 6/2/11, 11/22/11 and 11/26/12. Most Lovell trees failed the first year so only one replicated remained from the first planting.

University of California Integrated Pest Management Insect Update #28 Tehama County 9/16/13

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| INSECT | FIRST BIOFIX | SECOND BIOFIX | THIRD BIOFIX | FOURTH BIOFIX | ACTIVITY MOTHS/DAY | AVG. DEG. DAYS/DAY | DAY DEGREES FROM BIOFIX |
|---------------------|--------------|---------------|--------------|-------------------------------|--------------------|--------------------|-------------------------|
| CODLING MOTH | 4/8 | 6/3 | 7/22 | - | .25 | 25.8 | 1481 |
| ORIENTAL FRUIT MOTH | 3/4 | 5/6 | 6/13 | 7/15 and 5 th 8/23 | 5.7 | 31.3 | 735 |
| PEACH TWIG BORER | 4/1 | 6/3 | 7/18 | 8/23 | 33.8 | 25.8 | 608 |
| NAVEL ORANGE WORM | 4/11 | 6/17 | 7/22 | 8/19 | .56 | 21.3 | 590 |
| SAN JOSE SCALE | 3/25 | - | - | - | - | 20.4 | 3476 |

We are still finding eggs on our NOW traps (0.56 eggs/trap/day) and will continue to monitor through the next generation. Watch Walnut Husk fly traps for activity. UC IPM suggests a treatment if harvest is more than 3 weeks away.

Additional Pest management information plus twilight temperatures are available at the UC IPM website including a day degree calculator. <http://www.ipm.ucdavis.edu>.

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Thank You

Newsletters, Research Presentations
and Grower Meetings at

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