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Update

California Processing Tomatoes

Update

INSIDE:

2017 Members and Projects List

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2017 Projects: Continued

Curly Top Virus

Use of Beet Leafhopper Repellents to Manage Curly Top of Tomatoes

Joe Nuñez

Large replicated field tests of kaolin clay sprays and other products from unrelated projects to screen for activity as visual repellants to beet leafhopper. High local grower interest and cooperation.

Reducing insect virus vectors of Beet Curly Top Virus in processing tomatoes through soil health management

Amélie Gaudin

Proposal seeks to assess the impact of soil health management practices (cover crops, compost and humic substances) on tomato susceptibility to insect virus vectors. Second year work in the field.

Developing New Management Techniques for Vector-Borne Diseases of Tomato

Clare Casteel

A novel approach, testing the use of ethylene inhibitors for management of transplant susceptibility to reduce incidental leafhopper feeding and curly top transmission. First year was inconclusive for ethylene response, second year work will include leafhopper on tomato.

Foliar Diseases

Evaluation of Chemical Control of Bacterial Speck

Gene Miyao

Continuation of the basic field evaluation of newer control products. This proposal focuses on extra-early plantings in replicated plots on the UC Davis campus.

Bacterial canker of tomato: examining strain relationships and testing PCR primer specificity

Gitta Coaker

This proposal seeks a second year to validate markers developed in earlier projects with both known and new field strains from the 2016 growing season. Canker has been of small significance in recent dry years, but is still considered a major seed production concern. An effective canker identification program will help seed suppliers further reduce seed contamination risk.

WEED MANAGEMENT

Automatic Vision Guided Weed Control System for Processing Tomatoes

David Slaughter

A continuing proposal for a universal problem. This is a partnership grant with USDA to build a new machine vision system for processing tomato.

California Tomato Research Institute, Inc.

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2017 New Director

NEW DIRECTOR OF THE CTRI

The Board of Directors of the California Tomato Research Institute, Inc. has selected Zachary Bagley as Director of the CTRI effective April 1, 2017. As immediate past director of the Institute, I am greatly pleased with the Board's selection of Zach to this important technical and leadership position in the processing tomato industry.

Zach was raised in Indiana and graduated from Purdue University with a Bachelor of Science Degree in Wildlife Biology. Zach then joined the United States Peace Corps and worked in Kitgum, Uganda as an Economic Development Officer. While in Uganda Zach partnered with local growers to improve their production and access to markets for the following crops: honey, sesame, sweet corn, dry beans, and cassava. He was also tasked with measuring the efficacy of a regional USAID funded conservation agriculture program. Upon return to the United States Zach attended UC Davis for a Masters of Science in International Agricultural Development. While at Davis he was a Business Development Fellow at the Center for Entrepreneurship and Graduate School of Management – a program which provides hands-on experience for science and engineering graduates in developing business skills for a career in industry. Zach initially applied his education and experience as an Agricultural Operations Supervisor for Olam SVI at their composting facility in Williams. While there, Zach operationalized a medium scale composting business to further Olam's efforts towards building commercially viable composting enterprises with agricultural by-products as input. After two seasons of successful operation, Zach moved to supervisor of field operations, first as assistant and in 2016 as primary for the Olam Colusa facility. Zach is highly regarded by his supplying growers, so much so that he came to apply for the Director position at the urging of those growers. One grower even openly mused that having Zach as a field representative would benefit him more directly, but that the industry would benefit more from Zach's ability and energy. Fine commentary on this selection to lead the Institute into the next 50 years.

It has been my privilege and pleasure to serve the growers, processors and supporting industries the past 26 years. As agriculturalists, we occasionally need to take a moment and recognize the great human and physical resources we are blessed to work with.

Please welcome Zach and help him continue the work ahead.



2017

Members of the California Tomato Research Institute

Sacramento Valley

Amistad Ranches
Walnut Grove

George Aoki Farms, Inc.
Woodland

K & D Aoki
Woodland

Barrios Farms Inc.
Yolo

Dan Best Ranch, Inc.
Woodland

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Woodland

Bullero Farms
Woodland

Bullseye Farms
Woodland

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Winters

Chan Farms
Courtland

Dettling Farms
Woodland

Sean V. Doherty Farms
Dunnigan

Dougherty Bros.
Robbins

E and H Farms
Dixon

E and J Farms, Inc.
Woodland

F & F Company
Walnut Grove

Fong Farms, Inc.
Woodland

Harlan Family Ranch
Woodland

Holdener Farms, Inc.
Dixon

Hunn, Merwin and Merwin, Inc.
Clarksburg

Kidwell Farms
Davis

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Elk Grove

Knight Ranches, Inc.
Glenn

La Grande Farms Inc.
Williams

Llano Seco Rancho
Chico

Los Rios Farms
Davis

Mayflower Farms, Inc.
Arbuckle

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Woodland

Moroni Farming & Leasing Co.
Meridian

Joe Muller & Sons
Woodland

Mumma Brothers
Arbuckle

Nakahara Farms
Clarksburg

Nishimura Farming
Dixon

Chris & Shanna O'Sullivan Farming
Williams

Ornbaun Farms
Arbuckle

Scott Park Farming
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Knights Landing

Reveille Farms
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Reynolds Farm
Williams

Richter Bros. Inc.
Knights Landing

River Pride Farms, Inc.
Walnut Grove

River Vista Farms
Colusa

Roma Farms
Robbins

Rominger Brothers Farms
Winters

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Winters

Schreiner Brothers
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Arbuckle

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Sacramento

Tanaka Farms Inc.
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Dustin Timothy Farms
Dixon

Ronald Timothy Farming
Dixon

TOMCO
Woodland

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Davis

Van Ruiten Bros.
Robbins

Vann Bros. Farms
Williams

Viguie Farming
Winters

Wallace Brothers
Meridian

Williams Farms
Arbuckle

Joe Yeung Farms
West Sacramento

San Joaquin / Stanislaus

Alvarez Farms Inc.
Tracy

Arnaudo Bros Inc.
Tracy

Allen Baroni Farms
Thornton

Gregory J. Busalacchi Farms, Inc.
Stockton

Cerri and Son
Stockton

Del Carlo Farms
Stockton

Delucchi Farms
Stockton

Fantozzi Farms
Patterson

Jerry Goubert Farms
Westley

K and H Farms
Tracy

Lagorio Brothers
Linden

Lassen Farms
Stockton

F A Maggiore & Sons
Brentwood

Marca Bella Farms, Inc.
Tracy

Rich Marchini Farms
Stockton

Michelena Farms
Patterson

Mizuno Farms Inc.
Tracy

Mussi Ag
Stockton

Perez Farms
Crows Landing

Perez Farms - Westley
Westley

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Manteca

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Tracy

Hal Robertson Farms
Tracy

S4 Farms, Inc.
Ripon

J & R Sanguinetti Ranch
Linden

Triple Sanguinetti Farms, Inc.
Stockton

Sarale Farms, Inc.
Stockton

Simoni & Massoni Farms
Byron

T & M Farms
Westley

Toso Brothers
Stockton

Trinta Brothers
Patterson

Victoria Island Farms
Holt

Yamamoto Farms
Westley

Merced, Fresno & Coastal Valleys

A-Bar Ag Enterprises
Los Banos

Abbate Farms
Merced

Anderson Farms, LLC
Huron

J. F. Bennett Ranch
Firebaugh

Borba Farms, Inc.
Riverdale

Bowles Farming Company
Los Banos

Brinkley Farms
Dos Palos

Britz Inc.
Fresno

Burford Ranch
Helm

Burford Family Farming Co.
Fresno

Casaca Vineyards
Five Points

Clark Bros. Farming
Clovis

Coelho South
Five Points

Coelho West
Five Points

Crivelli Ranch
Dos Palos

Daddy's Pride Farming
El Centro

N.F. Davis Drier & Elevator
Firebaugh

W. C. Davis Farms
Firebaugh

MTD Farms
Firebaugh

William Diedrich Farms
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Riverdale

Farming D
Five Points

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Firebaugh

McKeen Farms, Inc.
Riverdale

Nickel Family LLC
Dos Palos

OPC Farms, Inc.
San Joaquin

Ralph Palazzo & Co., Inc.
Los Banos

Pentagon Company
Los Banos

Polder Bros. Farms
Lemoore

Pucheu Bros. Ranch
Tranquility

Red Rock Ranch, Inc
Five Points

Redfern Ranches Inc.
Dos Palos

San Andreas Farms
Brentwood

San Felipe Farms, LP
Hollister

Sano Farms, Inc.
Firebaugh

Santa Rita Farms, Inc.
Dos Palos

J.O. Seasholtz Farms
Fresno

Wolfsen, Inc.
Los Banos

Sun Pacific Farming Co.
Exeter

Teicheira Farms
Los Banos

Terranova Ranch, Inc.
Helm

Allen Thomsen Farming
Firebaugh

Teixeira & Sons
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Madera

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Donald Valpredo Farms
Bakersfield

WAY Farms
Bakersfield

Special Note:
The 2016 Annual Research Project Report is available only at:
www.tomatonet.org/2016

2017 Processing Tomato Research Projects



2017 Projects

AGRONOMIC RESEARCH

Optimizing irrigation and fertility in organic processing tomato farming systems

Kate Scow

Project will study sub-surface drip impacts on soil health and water-use efficiency. The proposal is designed to help determine which organic fertilizer inputs maximize yield while reducing water use; and how SSDI/furrow irrigation interacts with solid, liquid, and mixed fertilizer use to impact the farm as a whole.

INSECT MANAGEMENT

Identifying genetic resistance for *Liberibacter solanaceum* management

Clare Casteel

Psyllid transmitted tomato yellows can be a serious defect to peeled and diced tomatoes. While currently rare, increasing psyllid populations are our cue to begin work on this potential problem. The potato industry is already experiencing loss to the related zebra chip disease. Work is on the pathogen, not the insect.

GERMPLASM & VARIETY DEVELOPMENT

CM Rick Tomato Genetics Resource Center

Roger Chetelat

Annual support of the valuable germplasm bank. The Center serves as a warehouse for genetic materials used in many processing tomato research projects. To ensure this repository continues to serve our industry, CTRL in 2016 contributed \$100,000 to the Rick Center Endowment Fund in addition to our annual support.

Discovering, identifying and testing wild tomato genes that contribute to water stress tolerance

Dina St. Clair

Two complimentary projects seeking to identify and test "wild" genetic materials with potential to improve the water use efficiency of commercial processing tomato varieties.

DISEASE MANAGEMENT

Evaluation of Fungicides, Bio-Pesticides and Soil Amendments for the Control of Southern Blight of Processing Tomatoes

Joe Nunez

Continuation of intensive field trials with active stakeholder participation. This is the sixth year of continually refined. Project will move to the Kern County Research Farm in Shafter to test more difficult to execute and aggressive crop protection treatments.

Detection, monitoring and biological properties of the resistance-breaking strain of TSWV in California

Bob Gilbertson

Resistance breaking (RB) TSWV strains are here, and they already pose a major threat to all growing regions and the utility of resistant varieties. Work seeks to develop resistance management tools.

Isolation and characterization of the root-parasitic fungus *Plectosphaerella cucumerina* from processing tomatoes

Johan Leveau

A prudent evaluation into the characterization of a newly found fungus isolated from tomato fields.

Nematode Management

Evaluation of Alternative Nematicides for the Control of Root-Knot Nematodes of Processing Tomatoes

Joe Nunez

Proposal is for rotation experiments to develop resistance management practices with Nimitz® and to test other promising nematicide products at the Kern County Research Farm.

Characterization of resistance-breaking root-knot nematodes

Antoon Ploeg

Same team that identified Nimitz®, now working on broader nematode resistance management. Continued support for processing tomato nematode research at UC Riverside to develop and expand nematology resources for processing tomato Farm Advisors. Current research on resistant strain characterization will contribute to developing resistant genetics, but that is not a current major goal.

Fusarium Diseases

Pathogen characterization of Two Fusarium Species

Tom Gordon, Hung Doan

Completion of a major requested project to molecularly identify fusarium race 3. The technique will enable most labs to quickly identify the race of wilt affected plants. This will be especially important as F3 resistant varieties gain popularity and subsequent fields exhibit wilt-type symptoms. It will help industry preserve F3 resistance and sets the stage for F4 resistance detection.

Management of Fusarium wilt race 3 with Dip Treatments

Scott Stoddard

A series of grower field trials to test the label claims of several fungicides in the control or suppression of Fusarium wilt race 3. Project is designed to help growers better value the utility of at-planting treatments.

Tracking down Typhoid Mary: Rotation crop as hidden hosts of F3

Cassandra Swett

A survey proposal that may uncover a rotation connections that may have been overlooked. The project also funds the vegetable crops diagnostic laboratory. CTRL welcomes Dr. Swett back to California as the new Extension Vegetable Crops Pathology Specialist.

Effects of irrigation practices on Fusarium wilt of processing tomato

Cassandra Swett

Researcher brings previous personal work on water / pathogen research and develops an application to F3. Previous work indicates modification of some practices may reduce disease loss.



One Final Note:
2017 Assessment Rate
to remain at seven cents
per paid ton.

(continued on back page)

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