

Walnut news



Walnut Production Research

By **Jerry Moore**, *Production Research Committee Chairman*

Walnut production research goes back several decades. From a small beginning in 1971, this partnership has grown leaps and bounds just as the industry has and now more than a dozen projects totaling some \$ 1.7 million are underway. These cover orchard management, entomology, walnut breeding, pest management, and so on. The industry has benefitted from this partnership in a variety of ways, from having tools to address diseases and pests to better yielding varieties. Further, the California Walnut Board research endowment to ensure continued research into walnut breeding now stands at \$ 2.9 million. Part of the 'California Walnuts' brand appeal has been consistent quality, and the production research program has certainly played an important part in that by providing practical tools to growers.

Orchard Management

Orchard management deals with several aspects of production – rootstock, new varieties, cultural practices throughout the year, water management, tree and soil nutrition, and so on. Since partnering with UC Davis more than 4 decades ago, the ongoing research has resulted in several new varieties and rootstocks that are widely used today by walnut growers, including the ever popular Chandler, as well as better rootstocks such as Paradox and Vlach. Compared to older varieties and rootstocks, the newer ones can be planted more densely and are bred for disease resistance. This allows for more production while keeping the losses as low as possible.

Further, improvement in orchard management practices has resulted in water conservation as flood irrigation has given way to micro irrigation (drip, micro sprinklers) which can be programmed to operate in tandem with soil moisture sensors so trees are irrigated only when needed. In addition, better disease resistance has also resulted in lowering the use of chemicals. Given the current drought in California, some of the ongoing research is focused on improved water management strategies and managing soil nutrition to avoid leaching into ground water.

Plant Pathology

The field of plant pathology deals with studying plant diseases and identifying solutions to it. These diseases could be a result of pathogens (fungi, bacteria, viruses) or environmental factors. Some of the common diseases affecting California walnuts include Botryosphaeria and Walnut Blight. The California Walnut Board has partnered with UC Scientists on several projects aimed at finding solutions to various diseases through a combination of strategies – suitable chemicals, improved orchard management practices or more disease resistant rootstocks. This gives the growers several options to choose from depending on what's best for their operation.

In this issue...	
Domestic Update	2
Health Research Update	3
Export Update	5
Upcoming Meetings	6

(Continued on pg. 2)



Cultivar Improvement

Genetic improvement is perhaps the most exciting field as development in gene analysis technology leads to a better understanding of which genes control what aspects of production, harvest time, pellicle color, lateral branching, and so on. UC Davis recently announced that the walnut genome was completely mapped for the first time. What this means is that we now have a better understanding of how certain genes may control certain tree characteristics. Aside from the obvious implications of this for future breeding efforts, we can also identify the ‘culprit’ genes that may be responsible for controlling how and if the tree responds to pathogens and infections. This will vastly speed up improvement in disease resistance compared to conventional breeding techniques. This is the way of the future!

Some of the interesting research aims to identify genes responsible for resistance to soil borne pathogens. This, in turn, would help the industry reduce or eliminate dependence on soil fumigants, which are becoming increasingly regulated. In the same vein, identifying disease resistance genes for other diseases like crown gall, Phytophthora, root

lesion nematode or Armillaria root disease and expressing them in future rootstocks could help the industry save money in fumigants, fungicides and pesticide costs.

Entomology

Just like any other commercial crop, walnuts are also susceptible to a variety of insect pests. The entomology research focuses on identifying potentially dangerous pests for the walnut tree and managing them. Some of the important walnut pests are Husk Fly, Coddling Moth and Navel Orange Worm. Additionally, this also helps the industry in meeting the export country regulations with better orchard and pest management and post-harvest practices. Entomology research focuses on identifying the life stages of problem pests and various ways of controlling them so growers can have options should they need them. The variety of options in the grower toolkit also helps in preventing resistance buildup.

Thus, Production Research continues to help growers meet the demand for high quality and healthy California walnuts. 🌰

I Heart Walnuts Campaign Launched

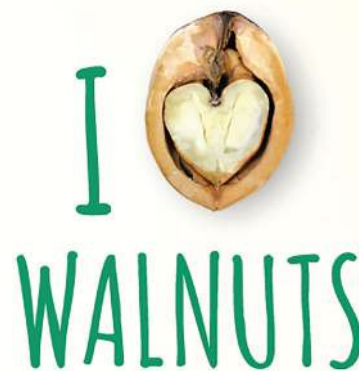
In March, California Walnuts launched an exciting new campaign called “I Heart Walnuts.” With a mission to give consumers the tools they need to incorporate walnuts into their everyday meal planning, the campaign – which integrates public relations, social media and retail activities - will highlight walnuts’ marvelous versatility, especially when they are paired with other whole foods.

I Heart Walnuts includes a supermarket registered dietitian program with grocery retail chains across the United States. The program showcases in-store activities, educational materials and online content that inspire consumers to enjoy walnuts regularly.

The campaign also includes five commodity board partnerships that will celebrate walnuts’ ability to pair deliciously with a number of whole foods. And well-known cookbook author, recipe developer and blogger Gaby Dalkin, the vibrant talent behind the popular blog “What’s Gaby Cooking,” has jumped on board as spokesperson to promote a series of walnut-themed recipes and pairings with other foods during a satellite media tour on National Walnut Day (June 15).

Relationships with bloggers are a terrific way to spread the word about walnuts’ versatility, and I Heart Walnuts is working with blogger networks Modern Mom (modernmom.com) and Recipe Redux (thereciperedux.com) to engage both “mom bloggers” and registered dietitian bloggers to develop recipes featuring walnuts. Walnut fans are also invited to join the fun through a consumer contest – from June 7 to July 12, we’ll ask them to create and share an original I Heart Walnuts recipe incorporating whole foods. The winner will receive \$5,000, and recipes submitted will be showcased on California Walnuts’ social media platforms. 🌰

To learn more about I Heart Walnuts, visit www.walnuts.org/IHeartWalnuts.



Registered Dietitian (RD) Blogger Program is a Success

This March, California Walnuts promoted its nutrition messages by partnering with key RD blogger influencers, who are highly respected in the health professional community. Partnerships with this group provide a wonderful opportunity to combine culinary recipes with nutrition messaging, delivering a powerful two-pronged approach to educating our health professional audience. This year’s program resulted in seven exciting posts, which included a scrumptious recipe for Walnut and Mushroom Vegetarian Enchiladas from fannetasticfood.com, which can be found on walnuts.org. 🌰



Speaker Panel (L to R) Christos Mantzoros, MD, DSc, PhD h.c.mult. Abha Chauhan, PhD, Emilio Ros, MD, PhD, Lenore Arab, PhD

Professional Meetings

Exploring the Role of Walnuts in Brain Health

The California Walnut Commission (CWC) organized and sponsored an educational session, “Food For the Brain: Learning How What We Eat Affects Cognition and May Prevent or Delay Dementia,” at the Experimental Biology/American Society of Nutrition conference, which attracts an international audience of over 14,000 leading research scientists. The speakers examined current science reflecting the role diet can play in improving cognitive health and shared emerging research exploring the effect of foods such as walnuts, on the brain utilizing new technologies.

In addition, CWC supported researchers shared 12 abstracts at the meeting which emphasized the benefits of walnut consumption in healthy aging, gut health, hunger and satiety, and metabolic health.

One highlight:

Effect of a 1-Year Walnut Supplementation on Blood Lipids among Older Individuals: Findings from the Walnuts and Healthy Aging (WAHA) study

Initial findings from the Walnuts and Healthy Aging (WAHA) Study indicate that daily walnut consumption positively impacts blood cholesterol levels without adverse effects on body weight among older adults. The WAHA study is a dual site two-year clinical trial conducted by researchers from the Hospital Clinic of Barcelona and Loma Linda University and is aimed at determining the effect of walnuts on age-related health issues. 📄

Recent Publications

Compositional analysis of walnut lipid extracts and properties as an anti-cancer stem cell regulator via suppression of the self-renewal capacity published in Food Science and Biotechnology. This cell research looked at walnut lipid extracts and anti-colon cancer effects by targeting colon cancer stem cells. Colon cancer is the second leading cause of cancer deaths worldwide. This is the first study out of Korea that has been supported by the CWC. Principle investigators are Yuri Kim, PhD, Department of Nutritional Science and Food Management at Ewha Womans University and Sang Woon Choi, PhD, CHA University.

Effects of diet composition and insulin resistance status on plasma lipid levels in a weight loss intervention in women published in the Journal of the American Heart Association. The research, led by Dr. Cheryl Rock of the University of California, San Diego School of Medicine, found that a diet containing unsaturated fats, such as those found in walnuts and olive oil, has similar weight loss effects as a lower fat, higher-carbohydrate diet.

Dr. Emilio Ros of the Hospital Clinic in Barcelona, Spain, had his study findings published, *Dietary α -linolenic acid, marine ω -3 fatty acids, and mortality in a population with high fish consumption: findings from the PREvención con Dieta MEDiterránea (PREDIMED) study* in the Journal of the American Heart Association. The study, derived from the cohort in the seminal PREDIMED trial, shows that consumption of omega-3s from plant sources such as walnuts, has protective effects on the reduction of all-cause mortality. The study also reveals that marine omega-3s, from fatty fish, reduce the risk of cardiovascular death. 📄

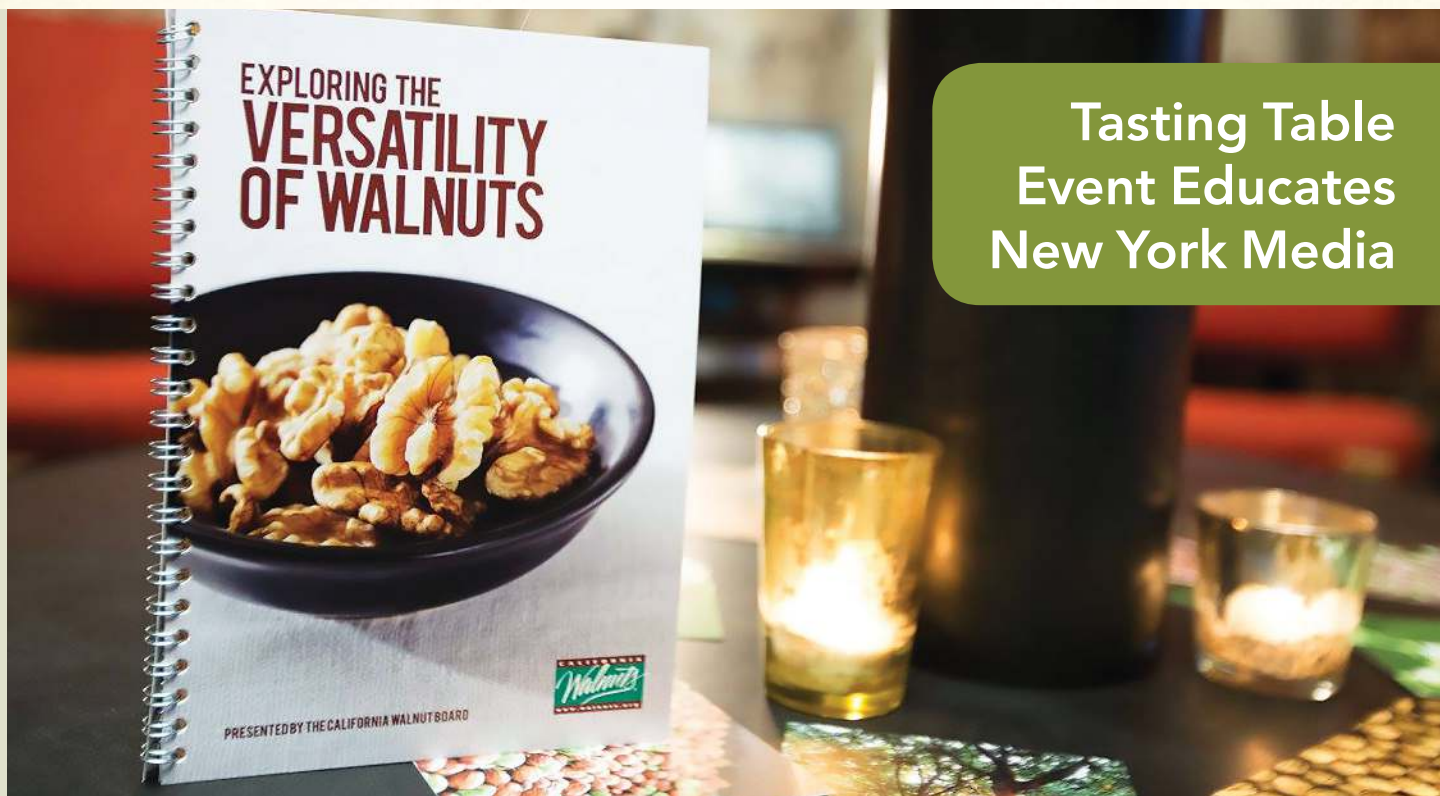
Exploring the Attributes of Light Amber Material for the Foodservice Industry

California Walnut Board staff recently teamed up with corporate chefs from the Oakland Coliseum and Sysco for a side-by-side blind tasting of recipes which incorporated California walnut light amber material and light halves and pieces (LHP).

The goal of the tasting was to explore the perceived similarities and differences between the two walnut specifications, incorporated into a

number of dishes; and to discuss what opportunities may exist in the foodservice industry for light amber walnuts.

Results from the tasting were exciting – a majority of dishes preferred by tasters contained light amber material; and when the darker material was identified in a dish, its distinctive, robust flavor was often perceived as a positive, appealing component of the dish. The participating high-volume corporate chefs agreed that light amber walnuts are an attractive ingredient option for foodservice professionals due to their full flavor and price advantage. The Board will incorporate these findings into our foodservice outreach and continue to consider opportunities for darker material in the foodservice industry. 📌



Tasting Table Event Educates New York Media

To increase awareness and boost opinions about walnuts among New York-based media, the California Walnut Board sponsored an evening event at the Tasting Table in Manhattan on April 27th. Handler and grower Bill Carriere of Carriere Family Farms attended the event to represent the walnut industry and educate participating media on all aspects of walnut growing and processing.

Chef Justin Smillie of New York City's praised Upland restaurant was the featured chef of the evening, and he created a menu of contemporary, exciting dishes that showcased the unique versatility of the walnut. The packed house of media attendees was wowed by chef Smillie's Catalan-style pork and walnut sausage, chittara pasta with

smoked walnut-onion jam; and grilled mackerel marinated in sake lees, walnuts and chili. The dinner ended sweetly with nocino-doused walnut gelato.

Attendees - whose employers ranged from Every Day with Rachael Ray and the Food Network to Food & Wine, Good Housekeeping, the NBC Today Show and O, The Oprah Magazine – were immersed in the story of walnuts throughout the evening. Discussion ranged from walnuts' production and exceptional health and nutrition benefits to their marvelous versatility in the culinary world. At the conclusion of the event, media guests expressed gratitude for an exceptional and educational evening. 📌

Alimentaria

The California Walnut Commission was pleased to take part once again in Alimentaria, the International Food and Drinks Exhibition to promote the use of walnuts as an ingredient in new products. This year the CWC featured savory walnut snacks to inspire the more than 150,000 visitors at the fair's 40th anniversary.

Throughout the four day event, visitors who came to the booth, were able to taste and compare walnuts spiced with curry, for exotic tastes; Cajun spices, for the brave, and rosemary for those seeking a traditional Mediterranean flavor. In this way the versatility of walnuts was highlighted and additionally the idea of using them as healthy snack. Additionally the CWC hosted two Bakery Inspiration Workshops designed to inspire bakery and pastry chefs.

Following Alimentaria, a video of the CWC activities at the fair was created to highlight our participation. The video will be available on the CWC Spanish website and YouTube pages. 📺



A Knacktastisch Year for California Walnuts

In 2016, the CWC has undertaken a rebranding effort in Germany to position California walnuts to the younger demographic. The theme of the rebranding will be “knacktastisch” which loosely translated means crunchtastic. The core message is designed to show how walnuts are a great partner for a fit and healthy lifestyle.

As part of the rebranding, the German website has been updated with a new look and feel. Additionally, to better appeal to a younger audience a blog has been created with targeted content to educate, entertain, and engage with a millennial audience. The blog will cover a range of topics from food trends to trendy kitchen design to recipes. The blog will be integrated into existing social media channels such as Facebook and Pinterest, where content can be cross promoted. Content will be written to specifically meet the needs and demands of the younger target group (digital natives), who process information and use channels differently from the previous generation. The blog's content will be highly dynamic and incorporate diverse guest writers from bloggers to chefs or fitness experts to other influencers.

The “knacktastisch” theme will be carried out through other public relations and advertising efforts where appropriate, providing a cohesive element to CWC activities in Germany, such as blogger events, social media content, and online advertising. 📺

Turkey

As the CWC grows the program in Turkey, we continue to broaden our message, reaching out to engage with health professionals. In April, the CWC attended the 52nd International Diabetes Congress at Rixos Sungate in Antalya. About 1,400 doctors, dietitians, and food experts attended this 4-day event to learn more about diabetes and discuss ways to counter it as the number of diabetes patients in Turkey is on the rise.

In the CWC booth, hundreds of brochures and flyers about California walnuts were distributed in addition to health abstracts related to diabetes and obesity. Popular dietitian Nesrin Esin staffed the booth and explained to visitors about the studies and walnuts health benefits. Some 130 dietitians registered their names and shared their contact details to receive more information about California walnuts and our health research. 📺



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Upcoming Events & Meetings

California Walnut Board & California Walnut Commission

ANNUAL SPRING MEETING

Thursday, June 9, 2016

Marriot Rancho Cordova

11211 Point East Drive

Rancho Cordova, CA 95742

Contact Dana at (916) 932-7070 for more information.

ANNUAL FALL MEETING

Tuesday, September 13, 2016

Marriot Rancho Cordova

Contact Dana for more information.



Contact Information

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and California Walnut Board

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