

Key Message At Ohio Berry Symposium: Berries for Healthy Living

By Sandy Kuhn
Berry Coordinator, Ohio State
University*

Editor's note: The heart and core of Northland Berry News could be summarized in various ways. The most compacted summary of what we're all about would read, "Health Soil, Healthy Plants, Healthy People" - and you could add, healthy animals, healthy environments, etc. We've also used the saying, "Health comes from the farm (especially berry farm), not the pharmacy" as a catchy way to focus on our mission. So, when I receive a news release about a major symposium that concentrated on nothing but the latest berry-health research, I was ecstatic. You will be hearing, reading, and hopefully using and profiting much more about what was presented and discussed at this November 12-13, 2002 symposium.

To whet your appetite, first read the symposium announcement. It's a great appetizer for the feast that follows. Then read the overview from one of the symposium coordinators and presenters, Sandy Kuhn, who is also the Ohio Berry Coordinator, Ohio State University, South Centers at Piketon.

"Recent research findings touting the health benefits of berries could be transforming the berry industry... The health effects of berries is clearly the best and quickest way we can grow the market and expand the berry

Columbus, will examine how new varieties, production practices and marketing techniques could turn these findings into profit opportunities for Ohio growers.

For example, recent research conducted at Ohio State University's James Cancer Hospital and Solove Research Institute has shown that certain types of berries, namely raspberries, blueberries and strawberries, can reduce the incidence of esophageal and colon cancers up to 80 percent in rats. Similar research is being conducted around the country, said Gary Stoner, head of the Laboratory of Cancer Chemoprevention and Etiology, who helped organize the symposium as a way to communicate these findings to those involved in research and the industry.

According to Sandy Kuhn, berry coordinator for Ohio State's South Centers at Piketon, findings such as those at Ohio State present exciting opportunities for growers to market their product in a new way, to new audiences.

"The health effects of berries is clearly the best and quickest way we can grow the market and expand the berry industry," said Kuhn. "Growers can now start looking at marketing a different kind of product, like frozen berries or convenience products, to institutional markets such as hospitals and schools."

This research also has important implications for the production of berries. "We'll be looking at research that develops conditions for

Researchers from numerous universities, colleges, associations and industries gathered in Columbus, Ohio in November to learn more about the current work being done in the berry industry in the United States. The four areas of emphasis were: Berry Production and Plant Breeding; Berry Composition; Health Effects and Marketing and Product Development.

The meeting was the result of a collaboration between The Ohio State University College of Food, Agricultural and Environmental Sciences and the School of Public Health. These two groups have been working together utilizing funding provided by the Ohio Legislature and both Colleges to study both the production and health benefits of berries. Dr. Gary Stoner, Professor and Chair in Environmental Sciences and Sandy Kuhn, Ohio Berry Coordinator organized the event.

In the berry production and plant breeding area the two keynote speakers were Harry Swartz, Associate Professor at the University of Maryland and John R. Clark, Professor in the Department of Horticulture at the University of Arkansas. Some of the excitement in both raspberries and blackberries is focused on the idea of primocane bearing blackberries and black raspberries. One of the huge costs in bramble production is the labor involved in pruning. The development of primocane bearing types allows the winter pruning to be done

variations in antioxidant levels in blackberries. Lydon Larcom, Professor, Microbiology and Molecular Medicine at Clemson University spoke on the anti-mutagenic and potential anti-carcinogenic potential in blackberries when varieties were compared.

Lately the health effects of berries have been highly publicized throughout the world. A health, nutrition or women's magazine cannot be looked at without somewhere in it the health benefits of berries being touted. Dr. Stoner and his associates have also publicized numerous articles in cancer and chemoprevention journals. The health benefits were also a large part of the symposium. Speakers included: David Ropa, Consultant to the Washington Red Raspberry Commission; Laura A. Kresty, James Cancer Hospital & Solove Research Institute; G. Keith Harris, National Research Council Associate - Pathology & Physiology Research Branch/National Institute for Occupational Safety and Health; Bruce Casto, Senior Research Scientist, James Cancer Hospital & Solove Research Institute; Berna Magnuson, Assistant Professor, Nutrition and Food Science, University of Maryland; David E. Wedge, Research Plant Pathologist, USDA-ARS-Natural Products Utilization Research Unit; Steve D'Ambrosio, Director, Division of Radiobiology, The Ohio State University; Chuanshu Huang, Assistant Professor, New York University School of Medicine; and Marge Leahy, Senior Manager of Health and Nutrition Research, Ocean Spray. The message from all of them was loud and clear. Studies show that the components in berries are essential for healthy living and can help in the prevention of numerous diseases very common in today's society.

The finale of the event was the presentations on marketing and product development. Jan-Marie Schroeder, Marketing Director for the Oregon Raspberry and Blackberry Commission spoke on what their state has done to turn all of the research being done into marketing tools for the growers. The research has definitely had an impact on increased sales. Sandy Kuhn, Ohio Berry Coordinator, emphasized the work that Ohio State has

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Minnesota Company Develops Natural Herbicide

By Andrea Johnson, Valley Editor

Growers have a new product that doesn't use synthetic chemicals to kill weeds. AllDown® Green Chemistry Herbicide is a non-selective weed and grass herbicide made from organic acetic acid, citric acid, garlic, yucca plant extracts and water. Developers say AllDown will control a wide variety of weeds, including pig-weed, velvetleaf and thistle.

"We have not found a weed yet that it did not work on. It burned back thistles in 24 hours," said Paul Marrs, president of SummerSet Products, Inc., Bloomington. SummerSet's AllDown label states the herbicide "works rapidly, providing fast dehydration and control of unwanted broadleaf weeds and grasses in a short period of time." AllDown can be applied on weeds either by spot treatments or with a hooded crop sprayer to keep the herbicide from getting on the crop. "AllDown is a desiccant that burns back the leaves by sucking the water out," said Marrs. "It's a plant-derived acid." Growers would apply AllDown once or twice to minimize weed growth until a crop canopy is formed.

Marrs and Neil Mathiason, SummerSet plant scientists, worked on the chemistry for AllDown over a seven-and-a-half year time period. "Neil started out adjusting the main ingredients. When we first started out, our product ate holes in leaves, so we knew we had something. We had to rearrange the ingredients and do a lot of testing to achieve our goal."

Marrs sent samples of AllDown in 1998 to Dr. Nick Christians, Iowa State University assistant professor of horticulture. Christians conducted a replicated plot study that compared AllDown to Roundup on Kentucky bluegrass.

"AllDown has an excellent quick knockdown," said Christians. "The plants would begin to show the effect within a few hours and by evening they would show signs they were going to die out. It was very effective on killing any tissue it came in contact with."

Christians recommended adding a surfactant to their product - that's why AllDown now contains yucca plant extracts making the product stick better to the leaves. Christians felt there were applications for AllDown as a weed killer on athletic fields, in parking lots, along fence lines, and for conventional or organic crop production.

Mathiason and Marrs, along with Paul's son, Bruce, develop and market products under the SummerSet Products label. Their products include a 2-3-3 plant growth supplement/biostimulant and a 10-0-3 phosphate-free fertilizer for turf use.

Organic farmers have depended heavily on cultivating, hand weeding and soil management techniques to minimize weeds - sometimes that's been a losing battle. With an effective non syn

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