

WISCONSIN CRANBERRY BOARD, INC.

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ANNUAL REPORT 2003-2004

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Dear Fellow Growers,

I am pleased to present to you the annual report of the Wisconsin Cranberry Board, Inc. for our past fiscal year. The report contains a copy of our financial audit, a summary of progress reports from projects we funded previously and a list of projects we approved for funding in April of 2004.

Our financial position remains strong as we strive to responsibly invest your check off dollars in research, education and marketing activities. The board is focused on making funding decisions based on the merit of each proposal and as a result has been able to work with other groups to jointly fund important projects.

We also continued our commitment to the support of research and communication projects on cranberry health. The partnership with the Cranberry Institute has resulted in a number of interesting and important discoveries about cranberry health. These results have also generated a great deal of publicity and information about the role of cranberries in improving the overall diets of people. We initiated support of three paid advertising programs this year with the radio networks of the UW Badgers football and basketball, Milwaukee Brewers and Green Bay Packers.

We will again look to support worthwhile projects that can help to improve your bottom line. While markets have recovered somewhat we still face the possibility of a building surplus. As a result we have to be vigilant to increase consumer demand and lower grower costs to help your farm be profitable.

We appreciate all of the support of growers this past year. We would invite all of you to participate in, and comment on, our programs.

Sincerely,

Kay A. Finch
President

WISCONSIN CRANBERRY BOARD, INC.

RESEARCH PROJECT REPORT SUMMARIES

The following progress reports were provided to the Wisconsin Cranberry Board, Inc. by the individuals and groups that received project funding during the 2002-03 fiscal year. These reports were presented to the WCB at or prior to the Budget Meeting on April 2, 2004. Copies of the full reports can be obtained from the authors or from the Wisconsin Cranberry Board, Inc. office.

Crop Research – Project Report Summaries

Breeding Cranberry for High Yields and Ease of Culture When Grown Under Wisconsin Conditions

Principal Investigators: Brent H. McCown, Department of Horticulture, UW-Madison; Eric Zeldin, Researcher

Cooperators: Irwin Goldman (Professor, Horticulture), Wisconsin cranberry growers, Ocean Spray Cranberries, Inc.

Objectives: Whole project: (1) To develop cranberry cultivars that have a consistently higher fruit yield per acre than “Stevens” when grown in Wisconsin. (2) To reduce the sensitivity of the yield of high color “Ben Lear” types to flooding/late winter injury. (3) To isolate some of the genetically determined components of yield, pest resistance and ease-of-culture of cranberry by a detailed study of carefully designed populations of seedlings from highly focused crosses. (4) To determine the inheritance of herbicide tolerance genes previously inserted into cranberry and then integrate such genetic engineering successes into the conventional breeding program.

2003-04 year: (1) To maintain established plots for the cultivation of new selections of cranberry. (2) To continue to breed and evaluate polyploid cranberries to produce populations that will be screened for pollen and ovule fertility, high fruit set, large fruit set and vine vigor. Begin field evaluation of polyploid selections.

Summary: The last distributions of HyRed were made to evaluators in 2003. Cooperators continue to make good progress toward establishment of full beds. WARF received a patent of HyRed in 2003 and details on the licensing format are expected in spring 2004. The evaluations of yield impact and trait selection are works in progress, yet good progress is reported. The second generation breeding plots at Biron identified abundant fruiting on outcrossed populations and uneven fruiting on inbred or partially outcrossed populations. A large plot of a polyploid selection was established in 2003. The effect of diploid pollen sources is being evaluated on yield and fruit set with a report to be completed in 2004.

Weed Control in Cranberry Bogs

Principal Investigator: Bradley A. Majek, Extension Specialist, Rutgers Agricultural Research and Extension Center

Cooperators: Rutgers Blueberry/Cranberry Research Farm, various growers

Objectives: (1) Cooperate with IR-4, manufacturers, state and federal agencies to receive registrations for three specific products that are not phytotoxic to the crop, control troublesome weeds and are environmentally safe. (2) Integrate effective herbicides into the current cranberry practices to improve control of yellow loosestrife, sedges and other weeds, prevent crop phytotoxicity and maintain the longest possible pre-harvest interval. (3) Evaluate herbicides with potential to control specific weeds identified as troublesome in cranberries for efficacy, and phytotoxicity in the cranberry crop system. (4) Screen herbicides registered on other crops and experimental herbicides for phytotoxicity to cranberries.

Summary: Section 18 Registrations have been issued for use of pronamide in NJ, and a Section 24(c) for clopyralid. The long term herbicide screening and trial at the Rutgers station has continued. The trials have shown promise in relation to crop injury and will be evaluated again this year for production. Three compounds have shown efficacy for control of yellow loosestrife, other annual weeds, sedges, rushes and redroot. Data will continue to be collected this growing season.

Further Examination of Cranberries as Antioxidants in Food Systems: Industry Evaluation and Optimization.

Principal Investigator: Mark P. Richards, University of Wisconsin-Madison, Dept. of Animal Sciences

Cooperators; Jess D. Reed, University of Wisconsin-Madison, Dept. of Animal Sciences, IBP

Objectives; (1) Conduct joint studies with IBP to determine practicality of incorporating cranberry anti oxidants in meats. (2) Optimize the availability of cranberry components to inhibit quality deterioration in various food systems.

Summary: The results of work with IBP on steaks showed unwanted results as the color of the meat was unacceptable although microbial inhibition was acceptable. A follow up study will look at a new carrier and use ground beef. The work with Oscar Mayer and turkey showed results as good as the current product in commercial use. The research will examine cost issues between cranberry compounds and current commercial product. Fraction 4 from cranberry powder was identified as the best inhibitor of oxidation in comparison to cranberry powder, a crude extract and fractions 1,2,3,5 and 6. Methods to extract antioxidants from cranberry press cake were also identified and a provisional patent application was accepted by WARF.

Ericoid mycorrhizal colonization of cranberry: a potential tool for combining nitrogen fertilization with weed management.

Principal Investigator: Kevin R. Kosola, University of Wisconsin-Madison Department of Horticulture

Objectives: (1) To determine the prevalence of mycorrhizal colonization in Wisconsin cranberry beds and the factors correlated with the variation in colonization. (2) Assess the potential for developing tannin-bound protein as a fertilizer nitrogen source which would be available to cranberries, but not to most cranberry weeds.

Summary Root samples from 100 cranberry beds representing 19 different varieties were analyzed. They represented substrates that ranged from peat to sand, pH range of 3.8 to 6.5, and bed age from 74 years to four months. Colonization was found to be common although rates are variable within and among beds with the highest rates in the upper layers of the soil. Soil pH, age or substrate as well as cultivar were not significant in the differences in rates. The next step, to look at the potential for developing tannin-bound protein as fertilizer nitrogen source has identified several candidate tannins and proteins for use. The next steps are to determine if cranberries will grow successfully with the tannin-bound protein as its sole nitrogen source and the best method for application are underway.

Ecology and Integrate Pest Management of Cranberry Girdler

Principal Investigator: Dr. Sheila Fitzpatrick, Agriculture and Agri-Food Canada

Objectives: (1) Generate additional information about the effectiveness of flooding for control of cranberry girdler larvae. (2) Study the feeding behavior, mobility and food preferences of larvae. (3) Compare survival of larvae reared on grass without fungal endophytes vs. survival of those reared on grass with endophytes. (4) Search for predacious arthropods that might prey on girdler eggs and young larvae in trash layer. (5) Begin study of light behaviors of male girdler moths attracted to natural and synthetic pheromone sources.

Summary: Results of the 2003 experiments showed that many larvae appear alive right after submersion but die within the following week. The longer the period of submersion, (48 and 72 hours vs. 24) the higher the mortality rate of the larvae. Warmer water temperature also increases mortality. Studies showed that most neonates move away from light and toward the earth. Neonates fed mostly on the crowns and roots of potted grass plants and showed no preference between cranberry and grass as a food source. Cannibalism occurs when food is in short supply and newly hatched larvae can travel at least 100 cm to a food source after hatch. Future experiments will continue to examine feeding behaviors and to investigate behavior relative to age and survival of older larvae.

Use of Lignocellulosic Materials as Sorbents for Pesticide and Phosphate Residues

Principle Investigator: Mandla A. Tshabalala, USDA Forest Products Laboratory

Cooperators: USDA Forest Service Forest Products Laboratory, Cape Cod Cranberry Growers Association, Massachusetts Department of Food and Agriculture Agro-environmental Technology Grant Program and the Cranberry Institute.

Objectives: The long-term goal of this project is to develop low cost filtration sorbents from modified lignocellulosic materials. Such filtration systems can be used by the industry to remove residual pesticides and phosphates from irrigation water before discharging into receiving waters. The short-term objective of this project was to design and construct a filtration system for limited field trials.

Summary: The results indicate that the sorbents do trap some phosphorous under field conditions, the removal efficiencies were less than those measured in the lab. However that may be due to the field levels of phosphorous in the water being at significantly lower concentrations than utilized in the laboratory setting. The conclusion is that sorbents have the potential for the removal of phosphorous residues from water provided two obstacles can be overcome: the cost of large scale modification of the bark and the high volume of flows leaving the marsh.

Transition to Biointensive Management of Cranberry Fruitworm

Principal Investigator: Anne L. Averill, University of Massachusetts-Amherst

Objectives: (1) Evaluate control of fruitworm using two new compounds slated for registration for use on cranberries. (2) Conduct in field screening of compounds with favorable environmental profiles. (3) Examine pheromone release from lures as they age in the field. (4) Evaluate pheromone trapping option. (5) Determine adult populations in fields following fall floods and develop recommendations for pheromone trapping data to trigger management measures. (6) Evaluate commercially available *Trichogramma wasps* in the lab and field. (7) Survey abundance of available *Trichogramma wasps* at commercial and wild sites.

Summary: Four compounds were evaluated with one showing good activity against fruitworm. The research found no effect of lure age on the mean capture of moths. Large variability among traps was seen but none the less pheromone trapping was a more reliable indicator to be utilized to time applications. A recommendation for trap use was developed based on the results to date. The releases of *Trichogramma* were ineffective due to high levels of rainfall.

Annual Promotion and Education Projects Reports

Wisconsin Cranberry Crop Management Newsletter – Volume XV

Project Coordinator: Teryl R. Roper, Department of Horticulture, UW-Madison

Cooperators: University faculty and staff, private cranberry consultants, Ocean Spray Cranberries, Inc., Cliffstar Corp.

Summary: Ten issues of the CCM Newsletter were published between May and September of 2003. Copies were sent at no charge to managers of all known cranberry marshes in the state. The newsletter was also made available on the internet and the text was distributed via the cranberry e-mail list as well.

Cranberry Weather Forecasts

Project Coordinator: Wisconsin State Cranberry Growers Association

Objective: To provide Wisconsin cranberry growers with accurate, regional weather forecasts.

Summary: The WSCGA worked with a private weather forecasting consultant to develop regional cranberry weather forecasts. These forecasts were available to growers via a toll-free number and online at the WSCGA website www.wiscran.org. Service was available from April 15 through October 31.

Brochure Printing

Project Coordinator: Wisconsin State Cranberry Growers Association

Objective: Provide members of the general public with information on cranberries through high-quality, professionally produced brochures.

Summary: The grant was used to print and distribute fifteen thousand (15,000) copies of the brochure 2003 Cranberry Harvest, eleven thousand eight hundred (11,800) Activity Booklets and twelve thousand five hundred (12,500) copies of the cranberry recipe brochure "Year Round Cranberry Recipes".

Cranberry Product Promotion

Project Coordinator: Wisconsin State Cranberry Growers Association

Objectives: The project included a number of separate activities all designed to provide the general public with information on cranberry production and cranberry consumption. The overall objective was to promote the use and consumption of cranberries and cranberry products. The projects included continuation of a booth and activities at the Wisconsin State Fair, implementation of a fall harvest communication program, updating and maintaining the cranberry website www.wiscran.org.

Summary: The Wisconsin State Fair promotion continued this year. The growers association contracts with Wisconsin State Fair Park for space in the Wisconsin Products Pavilion. A booth is set up which includes educational information on cranberry cultivation featuring a scale model cranberry marsh, display boards, cranberry vines and a videotape presentation on the Wisconsin cranberry industry. The other portion of the booth is utilized for sales of unique cranberry products. These products include cranberry white chocolate chunk cookies, cranberry muffins, chocolate covered cranberries, cranberry juice cocktail, sweetened dried cranberries, cranberry mustards, cranberry chutney and cranberry jams and jellies. The promotion also includes a cranberry mascot who appears each day in the parades and is in the booth at various times during the 10 day run of the fair. The association, through a public relations agency, also provides products to the various media outlets at the fair. This led to discussion of the products on air and increased visits to the booth by people coming to the fair. WSCGA also secured time slots on a demonstration stage in the Wisconsin Products Pavilion to conduct cooking demonstrations utilizing recipes from the recipe brochure.

The fall harvest communications program entails working with a public relations firm to develop key messages and themes for the fall harvest promotion. The themes this year were increasing demand through promotion of health benefits of cranberries. A satellite video tour was conducted at one of the state's fresh fruit operations and provided to television media across the state. Following the event media packets and news releases were mailed out across the Midwest. The public relations firm also made various story pitches to media outlets around the state and around the Midwest. This resulted in coverage in St. Paul, Milwaukee, Madison and other statewide media.

While it is difficult to quantify the results of promotions like this it is significant that business at the Wisconsin State Fair Booth was increased dramatically over previous years, by almost 30%. The requests for brochures from the WSCGA indicate great interest in information on recipes for the use of cranberry products. In addition, numerous articles appeared throughout the fall harvest season as a result of the efforts of the association and its fall communications program.

Badger Sports Corporate Partnership

Principal Investigator: Wisconsin State Cranberry Growers Association

Cooperator: Badger Sports Properties

Objectives: (1) Launch paid advertising campaign to communicate health, environmental and promotional messages on a regional basis, (2) Establish relationship between healthy sporting activities and cranberries, (3) Link cranberry growing tradition with other major state traditions and (4) Improve the image of the industry throughout the state.

Summary: For the first time in its history the WSCGA used a grant from the WCB to sponsor radio spots on University of Wisconsin Badger sports including football and basketball. The program featured two 30 second spots on the regional broadcast of each game on WTMJ of Milwaukee. A ten second in game mention on the statewide network was included as well. The commercials focused on the health benefits of cranberry consumption.

Support for Materials Aimed to Increase Cranberry Consumption in the United States

Principal Investigator: Sherry A. Tanumihardjo, University of Wisconsin-Madison

Summary: The grant was used to develop and produce Extension materials including a one page flyer "Enhance Your Antioxidant Potential" with cranberries as the featured functional food, reproduce a produce booklet created in 2002-03 and to produce and disseminate CDs with these materials for use by other states in their materials. Twelve thousand (12,000) copies of the flyer were distributed with another ten thousand (10,000) to be printed. Fifty (50) CDs were created and distributed as were three thousand (3,000) of the inserts, which were created for farmer's markets in 2003.

HEALTH RELATED RESEARCH - PROJECT REPORT SUMMARIES

The Wisconsin Cranberry Board, Inc. and Cranberry Institute have partnered for the past two years to fund a variety of research projects related to the health benefits of cranberry consumption. Under this partnership the organizations issue a joint request for proposals. Researchers submit applications to the Cranberry Institute. The applications are reviewed by a Technical Committee of the Cranberry Institute which makes recommendations for projects deserving funds. Those projects deemed worthy of funding are then jointly funded by Wisconsin Cranberry Board, Inc. and the Cranberry Institute. The Cranberry Institute then manages the research projects. The following are summaries of the reports of the projects funded by the partnership in 2003.

Investigation of the Role of Cranberry Antioxidants in Pathological Cardiovascular Events

Principal Investigator: Catherine C. Neto, University of Massachusetts-Dartmouth

Summary This study revealed excellent results in laboratory trials which indicate that cranberry antioxidants may minimize stroke-induced brain cell damage. Results were presented at the American Chemical Society (ACS) meeting this year, and covered in a press release by them. The CI also issued its own press release on the work, both of which generated excellent pick-up nationally. National pick-up was widespread, and included the following magazines and health-related websites:

Time Magazine, January 19, 2004
Eating Well, Winter 2004 issue
Remedy, Jan/Feb 2004 issue

Men's Health, December 2003 issue
Prevention Magazine, December 2003 (this focused on our cranberry-cancer research)

<http://my.webmd.com/content/article/73/88876.htm>
<http://www.health24.co.za/news/Stroke/1-947,24501.asp>
<http://www.sciencedaily.com/releases/2003/09/030910073908.htm>
<http://www.healthfinder.gov/news/newsstory.asp?docID=514961>
http://www.eurekalert.org/pub_releases/2003-09/acs-cmh082503.php
<http://yalenewhavenhealth.org/HealthNews/Reuters/NewsStory0909200312.htm>
<http://bmj.bmjournals.com/uknews/news20030911.shtml>

The positive press generated by this research will be extremely beneficial to the cranberry industry, representing an excellent opportunity to continue to build a strong link between cranberries and cardiovascular health.

A manuscript based on the presentation has been submitted to ACS for inclusion in a symposium series volume to be published this year. Two additional manuscripts have been submitted for publication. When the rat feeding study is completed, they expect to be able to publish this data as well.

Also, a presentation on studies relating cranberries and cardiovascular disease/stroke summarizing both *in vitro* and *in vivo* data will be given by Dr. Neto at the 2004 International Congress on Natural Products Research to be held this summer in Phoenix, Arizona. Lastly, they plan to submit a proposal to CI-WCB this year to examine some potential roles and effects of cranberry in the prevention of atherosclerosis.

Estrogenicity of cranberry extracts in an estrogen response element (ERE) assay, and determination of the presence of known phytoestrogens by HPLC and tandem LCMS

Principal Investigator: Navindra Seeram, UCLA

Summary: This work was based on findings that suggest compounds with estrogenic properties may relieve postmenopausal symptoms in women without increasing a risk for breast cancer. This work focused on cranberry anthocyanidins, which are reported to have estrogenic properties. The commercial cranberry extracts assayed exhibited estrogenic activity in the test system employed, although only at relatively low levels. An abstract of this work has been submitted to Experimental Biology for presentation at their meeting this spring.

Evaluation of biologically active components in cranberries

Principal Investigator: Leslie L. Pihak, University of Wisconsin - Madison

Summary: This project was only partially completed as Leslie has left the University and moved to the U. of Guelph. The preliminary work completed could serve as the basis for a future project. Of the funds remaining, \$27M was returned to the WCB and \$6.5 M was used on other research.

Ability of cranberry sauce to provide heart and urinary tract health benefits

Principal Investigator: Ted Wilson, Winona State University

Summary: This work is nearing completion and has thus far shown that the antioxidant levels of the commercially available sauces assayed are similar. Still underway are assays to determine the effect of these antioxidants on LDL oxidation, which could have implications for heart health.

Effects of cranberry on reducing oxidative stress in the treatment of peripheral and autonomic neuropathy in patients with diabetes mellitus

Principal Investigator: Janice Gilden, University of Chicago

Summary: This project has been delayed because the VA hospital involved has determined from the FDA that an Investigational New Drug (IND) application would be required for approval, even though the product used is conventional cranberry juice cocktail. Dr. Gilden is attempting to resolve this issue. Product and placebo have been prepared, and the patient base selected. Once the regulatory issue has been cleared, the project will move forward. Dr. Gilden has been asked to stay in close communication with us on this issue.

Projects Funded in 2004 – Funding for the following projects was approved by the board during the past year.

Crop Production Funding: Continuing Projects - 2004

Brent H. McCown

Breeding cranberry for high yields and ease-of-culture when grown under Wisconsin conditions.

(\$21,794)

This project continues the breeding program at UW Madison. Emphasis will be on continued scale up of HyRed, evaluation of new varieties and polyploids that have been developed in previous years. Ocean Spray Cranberries is providing co-funding for the project.

Bradley A. Majek

Weed Control in Cranberry Bogs

(\$8,000)

This grant supports the efforts of Dr. Majek to screen new weed control tools for Wisconsin growers. Efficacy trials are the first step in the registration process followed by residue trials. The Cranberry Institute, New Jersey Blueberry and Cranberry Research Center and Ocean Spray Cranberries are providing co-funding.

Mandla Tshabalala

Use of Lignocellulosic Materials as Pesticide Residue and Phosphorus Sorbants – Phase 3

(\$10,000)

Under this grant the USDA Forest Products Lab is engineering filtration systems that may be placed on water control structures. These filtration systems would utilize waste materials from the forest products industry. USDA is providing additional support.

Sheila M. Fitzpatrick

Ecology and integrated pest management of cranberry girdler

(\$1,000)

This is the second year of this project that is studying the biology of cranberry girdler with the objective of developing new control strategies. The WCB is one of many co-funders of the project. The British Columbia Cranberry Growers Assn, Cranberry Institute and Agriculture and Agri-Food Canada provide additional support.

Crop Production Funding: New Projects For 2004

Teryl R. Roper

Using anion exchange membranes as an alternative to chemical soil testing to estimate plant available phosphorus in cranberry beds.

(\$32,350)

This is actually the second year for this project. In 2003-04 funding was provided through the Whole Farm Conservation Project. The objective is to evaluate a new technology to measure available phosphorous in the soil for cranberries. Current soil tests measure total phosphorous which is not always in a form available to the plant. The new method, if practical will greatly improve nutrient management in cranberries.

Teryl R. Roper

Evaluation of promising herbicides under Wisconsin conditions

(\$3,250)

This project will work in conjunction with national efforts to register and make available new weed control tools for growers. Six to eight new herbicides will be evaluated in test plots as to efficacy, timing and rates under Wisconsin conditions. The research will hopefully result in improved weed control and additional tools for Wisconsin growers.

Teryl R. Roper

Yield component analysis.

(\$3,750)

The study will investigate different components of yield; attempt to identify them to be incorporated into the breeding program of Dr. McCown.

Kevin R. Kosola

Field tests of tannin-bound protein fertilizer: a potential tool for combining nitrogen fertilization with weed management

(\$9,070)

This study continues work on the relationship between mycorrhizal fungus and the uptake of nitrogen by cranberry plants. The research will attempt to determine if it is feasible to provide nitrogen to the cranberry plant in a form that would not be able to be utilized by common cranberry weeds. If the hypothesis is correct it may be possible to reduce weed populations and pressure without use of herbicides. The Cranberry Institute is providing additional financial support

Leroy Kummer*Irrigation Scheduling and Soil Moisture Management**(\$4,800)*

The study will utilize soil moisture monitoring equipment to determine the effects of irrigation. The soil's ability to hold water within the root zone will be closely monitored and irrigation will be scheduled based upon the soil characteristics. The results should enable growers to better schedule irrigation and conserve water and energy.

Carolyn DeMoranville*Determining the correct phosphorus rate for productive cranberries**(\$2,654)*

This is part of the ongoing national effort on phosphorous in cranberries. The grant will support a project to monitor phosphorous levels in both soil and plant tissue to determine rates for sustainable cranberry production. The project will also evaluate the relationship between soil test result, tissue phosphorous and yield. The WCB is partnering with the Cranberry Institute and the Cape Cod Cranberry Growers Association to support the project.

Education and Promotion Program Funding - 2004

Teryl R. Roper*Wisconsin Cranberry Crop Management Newsletter, Volume XVI**(\$900)*

The grant will be used to publish and mail ten issues of the CCM Newsletter to all known Wisconsin cranberry growers. Ocean Spray, Cliffstar Corp and Clement Pappas are also providing additional support.

WSCGA*Cranberry Product Promotion Program**(\$38,500)*

The grant will be used to support the WSCGA activities at the Wisconsin State Fair, fall harvest promotion activities and to maintain the industry website at www.wiscran.org

WSCGA*Cranberry Weather Forecasts**(\$10,000)*

The association will continue to provide specialized weather forecasts for cranberry growers via a toll free telephone call or on the internet at www.wiscran.org.

WSCGA*Brochure Printing**(\$8,500)*

This grant will support the printing and distribution of Cranberry Activity Books, 2004 Harvest Brochure and reprints of the cranberry brochure developed by the USDA CMC.

WSCGA*New Recipe Brochure**(\$7,500)*

The funds will be used to develop, print and distribute a new cranberry recipe brochure.

WSCGA*Cranberry Digital Library**(\$2,250)*

The funds will be used to establish a library of photos and images in a digital format to be used for presentations, brochures and other education and promotional purposes.

WSCGA*Wisconsin Badger Athletics Corporate Sponsorship**(\$29,000)*

The grant will expand the 2003-04 program to four thirty second commercials on all Wisconsin Badger football and basketball broadcasts on WTMJ in the Milwaukee market. A ten second message is included on the statewide network in all the broadcasts.

WSCGA*Milwaukee Brewer Radio Network**(\$20,655)*

Wisconsin cranberry growers will sponsor an in game featurette known as the Umpire Report which airs in all 162 of the broadcasts on the statewide network.

WSCGA*Green Bay Packer Radio Network**(\$22,100)*

The grant will be used to sponsor a 30 second message during the Packer Pre-Game Show, approximately 30 minutes prior to kick off. The package also includes a sponsorship billboard for each game and a 10 second spot in the Game Day Post Game Show.

Wisconsin DATCP*Alice in Dairyland Media Blitz**(\$4,000)*

These funds will be used to support a two week media blitz by Wisconsin's Alice in Dairyland to promote the health benefits of cranberry consumption and raise awareness of the state's largest fruit crop. Television and radio scripts will be created and media around the state will be contacted to arrange interviews. The interviews will take place over a ten day period in August of 2004.

Cranberry Institute*Health Communications Projects**(\$20,000)*

The WCB will be supporting a booth at the Wisconsin Dietetics Association and a Health Research/Media Conference to be conducted by the CI. This is in support of communicating the results of health research and to assist in developing better research projects and collaboration among the cranberry research community.

Mark P. Richards*Examination of Cranberry Press Cake as a Source of Antioxidants in Food Systems**(\$18,900)*

The study will investigate developing a product from cranberry press cake that could be utilized by the meat processing industry to extend shelf life of different meat products. If successful the project would create a value from what is now a waste product.

Sherry Tanumihardjo*Nutrition Education Concerning Physical Activity and Antioxidant Intake**(\$6,000)*

The funds will be used by the UW Extension and the Department of Nutritional Sciences at UW Madison to purchase materials for physical activity campaigns, reproduce flyers for adolescent children on nutrition and to continue to incorporate cranberries in outreach activities.

Health And Medical Research Funding - 2004

Daniel Grenier, Universite Laval-Quebec*Potential for oral health benefits from cranberry constituents.**(\$41,500)***Moussa A. Diarra, Agriculture and Agri-Food Canada***Effect of cranberry on polymorphonuclear function and epithelial cell colonization by Staphylococcus aureus and Escherichia coli.**(\$17,000)***Catherine Neto, University of Massachusetts-Dartmouth***Do Cranberries Reduce the Progression and Severity of Atherosclerosis?**(\$21,200)***Heidrun Gross, University of California-Davis***"Cardioprotective Effects of chronic consumption of Dried Cranberries in Human Subjects"**(\$33,003)*

WISCONSIN CRANBERRY BOARD, INC.

Statements of Financial Position	
Fiscal Year Ended August 31, 2004	
ASSETS	
Cash – Note 4	123,571.87
Certificates of Deposit – Notes 2 and 5	196,346.41
Interest Receivable	966.32
Assessments Receivable	<u>1,331.61</u>
TOTAL ASSETS	<u>\$ 322,216.21</u>
LIABILITIES	
Administrative Services Payable	\$ 12,847.22
Refundable Assessments	0.00
GRANTS PAYABLE – Note 3	215,169.00
Deferred Grant Revenues- Notes 1 and 5	<u>0.00</u>
TOTAL LIABILITIES	228,016.22
 NET ASSEST - Unrestricted	 <u>94,199.99</u>
 TOTAL LIABILITIES AND NET ASSETS	 <u>\$ 322,216.21</u>

Statement of Cash Flows	
Fiscal Year Ended August 31, 2004	
CASH FLOWS FROM OPERATING ACTIVITIES	
Cash received from:	
Grower Assessments-net of refunds	\$ 358,801.64
Specialty Crop Block Grant	0.00
Interest Income	<u>10,355.01</u>
	\$369,156.65
Cash paid for --	
Administrative services	22,844.00
Professional fees	1,075.00
General & administration expenses	1,805.07
Grant disbursements	<u>829,408.50</u>
	<u>855,132.57</u>
 NET CASH (USED BY) PROVIDED BY OPERATING ACTIVITIES	 (485,975.92)
CASH FLOWS FROM INVESTING ACTIVITIES	
Net decrease (increase) in investment	
in Certificates of Deposit	<u>425,295.83</u>
NET CASH PROVIDED BY (USED BY) INVESTING ACTIVITIES	<u>425,295.83</u>
NET (DECREASE) INCREASE IN CASH	60,680.09
 CASH AT BEGINNING OF YEAR	 <u>184,251.96</u>
CASH AT END OF YEAR	<u>\$ 123,571.87</u>

Statements of Activities	
Fiscal Year Ended August 31, 2004	
UNRESTRICTED REVENUES	
Grower Assessments	\$ 360,339.53
Interest Income	14,557.82
Specialty Crop Block Grant	<u>518,000.00</u>
 TOTAL UNRESTRICTED REVENUES	 \$ 892,957.35
MANAGEMENT & GENERAL EXPENSES	
Administration - Dept of Ag	2,809.07
Administration – WSCGA	23,515.73
Audit and Tax Preparation Fees	1,075.00
Office Supplies	12.10
Bonding	373.00
Post Office Box Rent	38.00
Printing/Copying/typing	572.87
Filing Fee	10.00
Meeting Expenses & Miscellaneous	<u>799.10</u>
 TOTAL MANAGEMENT & GENERAL EXPENSES	 <u>29,204.87</u>
 Excess of Unrestricted Revenues over Expenses Before Grant Disbursements	 \$ <u>863,752.48</u>
GRANT DISBURSEMENTS	
University of Wisconsin	51,927.00
Wis State Cranberry Growers Association	138,505.00
Bradley Majek- Rutgers Agri. Center	8,000.00
Cranberry Institute	101,051.50
Rutgers University	2,500.00
Leroy Kummer	4,800.00
Minister of Agriculture & Agrifoods-Canada	1,000.00
Cranberry Museum, Inc.	518,000.00
Averill Grant-Univeristy of Mass.	<u>3,625.00</u>
 TOTAL GRANT DISBURSEMENTS	 <u>829,408.50</u>
 EXCESS OF UNRESTRICTED REVENUES OVER EXPENSES & GRANT DISBURSEMENTS	 <u>34,343.98</u>
(INCREASE) DECREASE IN GRANTS AUTHORIZED BUT UNPAID	<u>(64,917.00)</u>
(DECREASE) INCREASE IN UNRESTRICTED NET ASSETS	(30,573.02)
 UNRESTRICTED NET ASSETS AT BEGINNING OF YEAR	 <u>124,773.01</u>
UNRESTRICTED NET ASSETS AT END OF YEAR	<u>\$ 94,199.99</u>

NOTES TO FINANCIAL STATEMENTS

FOR FISCAL YEAR ENDED AUGUST 31, 2004

Nature of Business

Wisconsin Cranberry Board, Inc. (the Board) is a not-for-profit corporation operating in Wood County, Wisconsin. They are an agricultural marketing and research organization authorized under the Agricultural Marketing Act which became effective September 1, 1983. The Board collects grower assessments mandated by the Cranberry Marketing Order and uses those funds to promote market research and development and industrial research and educational programs.

Note 1 – Significant Accounting Policies

Revenue Recognition

The Board is in receipt of a government grant to further promote and develop the cranberry industry in the State of Wisconsin. Revenue is recognized when the Board has incurred expenditures as outlined in their project proposal and in accordance with specified requirements. Amounts received, but not earned, are reported as deferred revenue.

Income Taxes

The Board is a not-for-profit organization exempt from state and federal income tax under Internal Revenue Code 501(c)(5).

Grower Assessments

Grower assessments are recognized in the period they are due. Assessments are based on barrels of production. The charge was ten cents per barrel for the fiscal year ended August 31, 2004, and August 31, 2003.

Grants Payable

Grants authorized but unpaid at year-end are reported as liabilities.

Note 2 – Certificates of Deposit

Certificates of deposit are valued at cost, which approximates market. They bear interest ranging from 1.40% to 2.85% and have maturities of less than twelve months, with penalties for early withdrawal. Any penalties for early withdrawal would not have a material effect on the financial statements. All of the certificates of deposit are federally insured up to \$100,000 under FDIC protection.

Included in Certificates of Deposit at August 31, 2003, is \$518,000 of Specialty Crop Block Grant Funds.

Note 3 – Grants Payable

The following is a summary of grants authorized and payable at August 31, 2004.

University of Wisconsin research	\$ 101,963.50
Cranberry Institute research	78,705.50
Bradley A. Majek – weed control research	8,000.00
Anne L. Averill-management of fruitworm	4,000.00
Sheila M. Fitzpatrick – cranberry girdler research	1,000.00
USDA Cranberry Marketing Committee	7,500.00
WI Department of Agriculture, Trade & Consumer Protection	4,000.00
USDA Forest Service	<u>10,000.00</u>
	<u>\$ 215,169.00</u>

Note 4 – Concentration of Credit Risk

The Cranberry Board maintains its cash and certificate of deposit balances with several financial institutions. All of the institutions are insured by the Federal Deposit Insurance Corporation up to \$100,000. However, the account balance at one institution is \$123,572. Accordingly, on August 31, 2004 the Board's uninsured cash balance totaled \$23,572.

Note 5 – Deferred Grant Revenue

In November 2002, the Board was awarded and accepted a Specialty Crop Block Grant in the amount of \$518,000. The funds were to be used to create an education and promotion facility for the cranberry industry. The money was received in December, 2002, and was invested in certificates of deposit as of August 31, 2003. Since no expenditures had been made toward the completion of the planned education and promotion facility project as of August 31, 2003, the entire grant, plus interest earned of \$5,389.49 were recorded as deferred grant revenue in the prior year.

During fiscal 2004, the Board contracted with the Cranberry Museum, Inc. (CMI) to help develop the Wisconsin Cranberry Discovery Center. The Discovery Center is an education and promotion facility for the cranberry industry located in the Village of Warrens, WI. The facility is now complete and open to the public. As of August 31, 2004, all grant funds had been disbursed to CMI.

WISCONSIN CRANBERRY BOARD, INC.
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Annual Report

RETURN SERVICE REQUESTED