MESSAGE FROM THE PRESIDENT

It seems the one constant we have in our culture is change. The Midwest Aronia Association is no exception. With Craig Winquist, President the past two years, stepping down from the Board, we have new leadership and most likely some change. I mean that in the most positive way. Craig did a masterful job of keeping us focused on our mission of educating the membership and that mission will remain the emphasis of MAA. However, I anticipate you will notice some changes resulting from a change in leadership. After our initial meeting following the conference, one thing that was imminently obvious about the new Board was their interest in opening new doors by creating connections, utilizing social media more effectively, and to better utilize the membership through involvement. Did Henry Ford get it right when he said, “coming together is a beginning; keeping together is progress; working together is success.” We plan to put that concept to the test.

During my search for conference speakers, I was moved by the willingness of people to help us in our efforts to develop this industry. Without deviation, they recognized, as we do, the many benefits of the Aronia berry and were willing to participate on a variety of fronts. Many of these folks have connections well beyond the board and membership and are willing to share the story of the berry with audiences we might invest months or years attempting to develop a trusting relationship. My promise to you, the membership, is we, the board, will be exhausting a considerable amount of energy in an effort to promote the berry we have come to know as the “super berry.” Please feel free to contact the board with your ideas.

Best wishes for a successful growing season.

Kent Klinkefus, President
Midwest Aronia Association

“Coming together is a beginning; keeping together is progress; working together is success.” — Henry Ford
2019 is going to be an exciting year for Aronia! Your 2019 Board of Directors is dedicated to making that statement come true.

Aronia is trending more now than at anytime time in its history. This year you will see many new things being introduced by the MAA Board. New outreach. New ideas.

A new vision for the MAA! It is exciting to hear all of the new ideas being proposed by the Board and this year looks to be the best year yet for Aronia and advancements by the MAA.

During the 2019 Annual Conference in West Des Moines, IA, on March 15 & 16, a total of 3 new Board Members took office. Your Board is already off to an amazing start! New ideas, new ways, and new directions for the Aronia industry. What an exciting year it is going to be.

Following is your 2019 MAA Board of Directors. Please feel free to contact the Board at any time. The Board is here to help in whatever ways it can. Be watching . . . the MAA and Aronia is on the move.

President          Kent Klinkefus, Harlan, IA
Vice President     Lynn Jensen, Lake Preston, SD
Secretary          Dean Tranel, Madrid, IA
Treasurer          Janice Merrill-Mann, Papillion, NE
Membership         Kevin Kraft, Sebring, FL
Public Relations / Newsletter      Dennise Bowyer, Marshall, MO
Events              Dale Hilgenkamp, Arlington, NE
Education & Research  Peggy Hobza, Columbus, NE
                      Dean Tranel, Madrid, IA
Technology         Leroy Godfrey, Long Island, KS
                      Rich Voyek, Cambridge, IA

As you can see, the MAA Board of Directors is a diverse gathering of individuals from all across the United States who share a common interest ~ Aronia and the advancement of the industry.

The Board is looking forward to all the new year has to offer and looks forward to serving the members of MAA to the best of their ability in the coming year.
If you did not have an opportunity attend the MAA Annual Conference on March 15-16, 2019, you were missed. The weather was not entirely cooperative and those members hampered by the flooding had to travel great distances to even make it to West Des Moines. Those who were fighting the rising water were in our thoughts and prayers.

If you could not attend the Conference you will find an audio recording of the 2019 Conference available on the MAA website. The audio is available to all current members. Please take a moment and listen to all the great speakers. The Conference offered a great lineup of speakers and their participation at the Conference was greatly appreciated.

The MAA would like to thank all of the Speakers, Vendors and Sponsors who took time out of their schedules to attended.

Speakers - 2019 Conference

Brad Bolling - University of Connecticut
Changmou Xu - University of Nebraska
Mark Brand - University Wisconsin-Madison
Scott Dinkler, Nebraska Aronia Processors
Michael McNeill Phd, Ag. Advisory LTD
Vicki Nemitz, Aronia Growers, LLC, Wisconsin
Lee Freisen (Diversified Crop Insurance)
Barry Terhark (Farm Service Agency) Aronia Insurance Strategies
Glen Rabenberg, Soil Works, Yankto, SD, Soil preparation and nutrient management
Srinivas Jana Swamy - South Dakota State University Research
Keynote speaker: Dr. Debra Rose Wilson, Associate Professor, Austin Peay State University
Christine Peter, University of Massachusetts Research on Natural Products for Health Benefits
Dean Tranel – New MAA Fertilizer study

Vendors - 2019 Conference

Crop Insurance Solutions
601 1st Street, Milford, NE 68415
John Schreiter

Lifebrook, LLC
907 N. Norbeck St.
Vermillion, SD
Jolene Caldwell

Sustane Natural Fertilizer, Inc.
310 Holiday Ave, Cannon Falls, MN 55009
Travis Vieths

Aronia Unlimited
46551 264th Street, Sioux Falls, SD  57107
Matthew Schumacher
  Les Schaffer
  Randy Sarvis

Plantpeddler, Inc.
530 2nd Ave SW , Cresco, IA  52136
Adam Powers
Mike Gooder

Aronia Berry Services of Northeast Iowa
PO Box 101, Fairbank, IA 50629
Donna Costello
Dan Richards
Paula Schares
Spring is here and Summer is just around the corner! There are a variety of networking opportunities to consider when planning your Summer events. Field Days and Regional Meetings provide one on one time to meet with growers and producers in your area. If you are not available to travel to West Point, Iowa, and would like to get in touch with other Aronia enthusiasts in your area, please contact the MAA and we would be glad to put you in touch with growers and Regional Groups in your area. Be sure to check the next addition of the Newsletter for area Field Days coming in July and August!

WEST POINT, IA              JUNE 15, 2019

Kenny & Judy Sanders

Location Address - use 1792 228th Ave, West Point, Iowa

Kenny and Judy Sanders are hosting an Aronia Field Day on Saturday, June 15th, beginning at 1:00 p.m. at their farm in West Point, Iowa. You will have to use their neighbor’s address, 1792 228th Ave, West Point, Iowa, in your GPS because their farm address does not register on GPS. The Sanders Farm is at the end of a dead end gravel road. Drive all the way to the end of the road and through the gate. Anyone is welcome to bring an aronia berry snack if you would like. If possible please let Judy Sanders know by June 10th if you are planning to attend. If there is anyone else you know that would like to come, bring them along. Hope to see you on the June 15th.

For more information contact Judy Sanders at (319) 850-0862.
Glenn and Vickie York
DAUSON ARONIA BERRY FARM FAMILY, LLC
Mt. Vernon, IL

How cool would it be to watch your Aronia growing from this porch?

Glenn and Vickie York of Mt. Vernon, Illinois, are lucky to have this pleasure every day. Glenn and Vickie, along with their children, began their Aronia adventure in 2014 and now have over 25,000 plants in the ground. Growing Aronia has not been without bumps along the way, but the Yorks’ continue to try new and innovative concepts in weed control, fertilization and cultivation. They are working hard to produce a value added product for the Aronia industry. If you find yourself in or around Mt. Vernon, Illinois, you would be well served to visit the DAUSON ARONIA BERRY FARM FAMILY. The view from their getaway cabin and great Aronia conversation is well worth the trip.

Thank you to the DAUSON ARONIA BERRY FARM FAMILY for your commitment to the Aronia industry.

The Colorado State University Functional Foods & Human Health Laboratory is conducting a “human” study evaluating an Aronia Berry Dietary Supplement on Cardiovascular and Gastrointestinal Health. The study will last 8 months. The study will take place on the CSU Campus. The Principal Investigator for this study is Sarah A. Johnson, PhD, RDN. It is exciting that a human study is being conducted. The MAA is looking forward to the result of this study in the coming months.
Thank you to Amy Schultes, MSN, RN, for working with the MAA and agreeing to provide the following article. Be sure to watch for Ms. Schultes’ contributions to future additions of the MAA Newsletter.

Amy Schultes MSN, RN
Amy is currently an instructor of Health Occupations as well as a graduate student at Walden University studying Health Psychology.

Amy.Schultes@WaldenU.edu

March 2019

Treating and Preventing Obesity with Aronia berry?

Scientifically speaking obesity is the excessive accumulation of fat cells. Fat cells store fatty acids for future energy needs. Fat cells can both increase in size and number for those with obesity. In addition to storage of energy, fat cells also communicate with the endocrine system which regulates hormones throughout the body, specifically insulin.

The use of polyphenols have been linked to the prevention and treatment of obesity. Common foods that are high in polyphenol are grapes, cranberries, and green tea. Polyphenols are considered antioxidants. Specifically, this means that they fight against oxidative stress that leads to aging, cell damage, and inflammation. A person with obesity also has high markers for oxidative stress. With this known relationship and the extremely high levels of polyphenols in Aronia berry could Aronia berry cure or prevent obesity?

A group of researchers in Korea worked together to determine the effects of an Aronia berry supplementation on animals:

- Two groups of normal weight animals were given the same high fat diet. One group was also given an Aronia berry supplement. This group showed less body fat or weight gain than the group without supplement.
- Two groups of obese animals were given the same natural diet. One group was also supplemented with Aronia berry. The group supplemented with Aronia berry lost 30 percent more body weight than those in the non-supplemented group.
- Two groups of normal weight animals were given the same high fat diet. One group was supplemented with Aronia berry. This group despite their diet showed a decreased in lipid levels (blood fat) up to 75 percent of those in the non-supplemented group.
- Two groups of normal weight animals were given the same high fat diet. One group was supplemented with Aronia berry. The group supplemented with Aronia berry showed properly regulated insulin levels and overall more appropriate blood sugar levels while the group without supplementation showed erratic insulin and elevated blood sugar levels.

Overall the findings of this group lead to Yes! Aronia berry fights obesity on many levels for animals with diet-induced obesity and has a practical application to the prevention and treatment of obesity in humans.

Reference:
My Story about the Aronia Berry and how I believe it helped me with cancer.

My mother was taught about natural cures for ailments when she was adopted out of an orphanage in South Dakota. She used them in the kitchen to help with foods. She learned a lot about natural cures for the body and ailments. I also am a Bible believer and use that to help guide me like a verse in Revelation about the leaves or plants for the healing of the people. Being a believer I believe I was guided by God’s Spirit for a cancer ailment I had.

John 16:7 Nevertheless, I tell you the truth: it is to your advantage that I go away. for if I do not go away, the Helper will not come to you. But if I go, I will send him to you.  John 16:13 When the Spirit of truth comes, he will guide you into all the truth, for he will not speak on his own authority, but whatever he hears he will speak, and he will declare to you the things that are to come.

I had a sore on the back of my neck that would not heal - a dermatologist in Des Moines could not get it to heal by freezing it or ?? Somewhere before the Aronia Berry became popular I was guided to read about the benefits of the Aronia berry. Me being a believer in natural things like Apple Cider Vinegar, I thought I would see if I can find some. I found Aronia Berry concentrate Juice at the Hy Vee in Ankeny. This was the only thing I could find at that time and I started taking it in my coffee every morning. 5-6 weeks later that sore that would not heal was all healed up. So after experiencing that, I started looking for the plants and found some in Northwest Iowa. I ordered some and planted them. Until I could pick my own I would go and pick from someone else’s berry patch and have been using them ever since. After taking the berries for a while I developed cancer. I knew about the benefits of the berry so I kept right on eating them for my health. I would use them in my oatmeal every morning. I went to Mayo and they wanted to take my bladder out. I could not do that at the time because my wife was injured and I needed to care for her so they sent me back to take chemo treatments. I went thru chemo and then they said I would also be a good candidate for chemo and radiation so I went thru that as well. Both doctors were amazed that I did not get sick because of what I was taking for my treatments. So far I am in remission but I have to keep watching it for several more years. I still take Aronia Berries in my breakfast every morning and will continue taking it.

Name Withheld
Upon Request

Do you have a Testimonial to share? Please let others know how the Aronia has affected you or if you know of anyone that would be interested in sharing a testimonial please contact publicrelations@midwestaronia.org.
SPORTING KANSAS CITY ANNOUNCES LOCAL PARTNERSHIP WITH TOHI VENTURES

On April 1, 2019, Sporting Kansas City announced a three-year partnership agreement with Tohi Ventures as the club’s preferred healthy lifestyle beverage.

Through the joint partnership, Tohi Beverages products will be sold at Children’s Mercy Park during Sporting Kansas City home matches and will also be made available to Sporting players and technical staff members at Pinnacle, the team’s world-class training facility.

In addition, Tohi Ventures will expand their reach in the Kansas City market with branding on display at Children’s Mercy Park, Wyandotte Sporting Fields, The Victory Project Gala and SportingKC.com. Sporting Kansas City’s social media channels will also showcase a series of Sporting Stats, presented by Tohi Ventures, throughout the Major League Soccer season to highlight players milestones and team achievements.

For more information:

In the next few weeks a new feature will be added to the Members side of the MAA website. An interactive map will be included from which you can see the location of other members in your area. Your ability to connect to other members just got easier.

Also, it has been several years since the MAA Partner section of the website has been updated. There are plan to update this information. If you are a Member and currently listed in the Partner section of the website you will be contacted in the near future concerning your listing. If you are not currently listed on the MAA Partner’s Page on the website and would like to be, it is free to MAA Members. It is quick and easy to be included. Simply contact publicrelations@midwestaronia.org

This is just two new features being introduced in 2019.
Just a reminder - Farmer’s Market are now open! Take the opportunity to buy local and support those Aronia growers who sell through local markets. Although the following has been shared before, it’s worth sharing again.

Considering a local Farmers Market in your area? You might find the following links and information helpful:

**USDA Farmers Market Directory**
https://www.ams.usda.gov/local-food-directories/farmersmarkets
The USDA site allows you to search by zip code, Products Available, Payments Accepted, Market Location, Winter Markets and offers State Contacts.

**Farmers Market Coalition**
https://farmersmarketcoalition.org/education/qanda/

- **Iowa**
  http://www.iafarmersmarkets.org/
- **Illinois**
  http://nfmd.org/il/
  https://www.ilfma.org/
- **Michigan**
  http://mifma.org/
- **Minnesota**
  https://www.mfma.org/
- **Missouri**
  https://www.missourifarmersmarkets.org/
- **Wisconsin**
  http://www.wifarmersmarkets.org/
- **Nebraska**
  https://www.nebraska.gov/apps-ag-farmers-market/ (Great searchable options.)

The above is only offered as a sampling of the sites available. There are many local markets throughout the U.S.

Farmer’s Markets are only one option to sell Aronia. There are several growers and companies throughout the United States who purchase Aronia and produce quality specialty products. Several of these companies are MAA members. You will also see startup companies hitting the market in the future looking to include Aronia in their product lines. Just look around, there is no doubt the demand for Aronia berries and Aronia based products has increased. The general public is more aware of Aronia now than they were just one year ago. That’s exciting!

Everyone’s common purpose is **ARONIA**!

It’s time to **Build the Buzz**! Let’s join together to keep Aronia in the spotlight and keep the industry moving forward for the benefit of all. The MAA Board of Directors has made a commitment to do that very thing.
THANK YOU to all who participated in the Aronia Bake Off at the 2019 MAA Conference. There were many great products presented and it was a wonderful tasting event. The event shed light on the many Aronia products that are on the market today and gave the membership an opportunity to talk with the people behind the products.

Following are few Recipes that were given to me during the Conference. I hope you will have an opportunity to try the Recipes are your leisure.

I’m always looking for new Recipes. If you have something that you have tried that you would like to share, simply go to https://midwestaronia.org and click on the Recipe tab at the top of the page. From the dropdown menu follow the prompts. Include your Recipe and click submit. If you would prefer, you can send them to publicrelations@midwestaronia.org and I will gladly enter them for you.

Try one (or all) of the following Recipes and let us know what you think.

**NO BAKE COOKIES**
*KJM Berries and Nut Farm*
*Kenny, Judy & Mark Sanders*

**Ingredients:**
- 2 cups Sugar
- ¼ cup Butter
- 3 Tbls. Cocoa
- ½ cup Milk
- ½ cup Peanut Butter
- 1 Tsp. Vanilila
- 3 cups Oatmeal
- ½ cup Aronia Berries (Chopped)

**Instructions:**
Mix the sugar, butter, cocoa and milk over heat. Cook for 1 minute at a rolling boil. Remove from heat. At the remaining ingredients. Drop from spoon onto wax paper. (Makes 3 dozen) or spread in a 8 x 8 pan.
CHEESY ARONIA BERRY DESSERT
There was no name left with this Recipe - but - this was Awesome! Thank you.

Ingredients:

**Crust**
- 2 Cans Crescent Roll Dough

**Filling**
- 3 Cups Cream Cheese (8 oz. each)
- 3 cups Powdered Sugar
- 2 Tsp. Vanilla Extract
- 2 cups Fresh (or thawed) Aronia berries

**Topping**
- 1 Stick Butter, melted
- ½ cup Sliced Almonds
- ½ cup Sugar
- 1 Tsp. Cinnamon

Instructions:

Preheat oven to 350. Butte 9 x 13 plan. Unroll one can of Crescent Roll and spread in bottom of the pan. Beat cream cheese, powdered sugar and vanilla. Beat well. Gently fold in Aronia berries. Spread over the bottom crust. Top with other Crescent Roll. Pull dough end to end to cover cream cheese. Pour melted butter over top crust. Mix almonds, sugar and cinnamon. Sprinkle over top of melted butter. Bake 50 -60 minutes or until golden brown. Serve warm or cold. Refrigerate leftover dessert.

CARAMEL APPLE ARONIA MONKEY BREAD MUFFINS

Ingredients:

- 1/2 cup Peeled and Diced Green Apples
- 1/2 cup Aronia (fresh or frozen)
- 4 Tbls. Butter (Divided) (2 Tbls for caramel mixture / 2 Tbls for Cinnamon mixture)
- 1 Tbls. Brown Sugar
- 2 cans Buttermilk Biscuits
- 1 cup Stevia (or regular granulated sugar)
- 1 Tbls. Cinnamon
- 12 Bite-sized Snickers Candies

Instructions:

Preheat oven to 350. Line muffin pans with liners and set aside.

In a small saucepan combine brown sugar and 2 tablespoons of butter. Cook over low heat until sugar dissolves. Stir it often.

In a zip top bag, combine sugar and cinnamon.


Spread a little of the butter / brown sugar mixture over bottom of each liner. Follow it with 3 rolls of dough. Place some apple pieces in the cup - add a few Aronia Berries and top that with one bite-sized Snicker. Top with 3 more biscuit pieces. Pinch the biscuits on the top of each cup together so that the chocolate is covered. Melt the remaining butter and brush remaining butter over each muffin.

Bake for 15 minutes or until golden brown. Serve warm. They go good with a side of vanilla ice cream too! Yummm.
ARONIA BERRY LEMON CRESCENT RING
Yield 12 rolls

**Ingredients**
- 4 ounces cream cheese, softened
- 1/4 cup Stevia
- 1 tablespoon fresh lemon juice
- 1 teaspoon grated lemon zest (see Note)
- 1 can (8 oz) Pillsbury Crescent Seamless Dough Sheet
- 1/2 cup fresh or frozen Aronia Berries

**Glaze**
- 1/2 cup powdered sugar
- 2 to 3 teaspoons milk

**Instructions**
Preheat oven to 350°F. Spray large cookie sheet with cooking spray or line with parchment paper. In small bowl, mix cream cheese, granulated sugar, lemon juice and lemon peel with electric mixer on medium speed until well blended. Unroll dough sheet. Spread cream cheese mixture on rectangle to within 1/2 inch of edges. Sprinkle evenly with Aronia Berries.
Starting with 1 long side of rectangle, roll up the dough tightly and pinch the edge to seal. Some of the filling will leak out during baking but that’s okay! With a serrated knife, cut into 12 slices. My cream cheese was pretty soft so cutting it was a little tricky. Don’t worry if it’s messy. When it bakes it will take care of any issues. Arrange slices on cookie sheet in a circle, overlapping slightly.

Bake 15 to 20 minutes or until golden brown.

In small bowl, mix the glaze ingredients until thin enough to drizzle. Drizzle over warm crescent ring. Serve warm or room temperature.

**Baker Notes**
When zesting the lemon be sure to grate only the yellow part of the lemon. Be careful not to get into the white part under the skin. The white part can be REALLY BITTER.

---

BEST EVER MEATLOAF
That’s right - with Aronia!

**Ingredients**
- 2 Eggs
- ½ cup Tomato Juice
- ½ cup Oatmeal
- ½ cup Onion
- ½ cup grated carrots
- ½ cup Aronia (Chopped)
- 1 cup Mozzarella Cheese
- 1 tsp. Parsley
- 1 tsp. Salt
- ¼ tsp. Pepper
- 1 ½ lbs. Lean Hamburger

**Instructions**
Preheat oven to 350°F. Bake for 45 minutes. Spoon a little ketchup on top. Bake an additional 30 minutes. Let stand for 10 minutes before serving. Makes approximately 6 servings.
Do you have Aronia equipment to sell? What about products or service centered around the Aronia industry? If so, this is section for you. If you would like your items to be included in the MAA Trading Post, simply email your post for consideration to publicrelations@midwestaronia.org. Please include contact information so you can be contacted if there are any questions. Once your item is approved your post will be added to the next Newsletter in the “MAA Trading Post” section.

The Midwest Aronia Association reserves the right to rescind or reject any and all submissions to the MAA Trading Post. The MAA expects its Members to act in a ethical and reputable manner when dealing with anyone responding to a post listed in the MAA Trading Post. The MAA makes no representations about the products or services offered in the MAA Trading Post section of the Newsletter but is merely offering this section to link Members and fulfill a need within the Association.

**Aronia Growers LLC** is looking for quality aronia growers interested in working together. We sell Sweetened Dried Aronia Berries, 65 brix aronia concentrate and aronia pomace. We also will process aronia juice to the customer specs and have partners making aronia powder. We processed 560,000 pounds of aronia fruit this past year, and our customer base is growing.

If you are interested in learning more about Aronia Growers LLC, please email Vicki Nemitz. vicki.nemitz@aroniagrowersllc.com Phone # 608-387-9810. Please include you number of acres/plants, where you are located and whether you are a conventional or an organic grower.

____________________________________

**EQUIPMENT WANTED:** Aronia Destemming Equipment. Please call Justin at (816) 210-8521

**FOR SALE:** 30# Harvest Totes. Most Used. Please call: (515) 708-3394 (Ames, IA)
Susceptibility of Aronia (Aronia melanocarpa) to Drosophila suzukii (Diptera: Drosophilidae)

Author(s): Katie Hietala-Henschell, Emma Pelton, and Christelle Guédot
Published By: Kansas Entomological Society

https://doi.org/10.2317/0022-8567-90.2.162

ABSTRACT: Drosophila suzukii is an invasive pest of cultivated fruit crops in Europe, Asia, and the Americas. However, more information is needed to understand the extent of D. suzukii utilization of wild fruit and specialty crops as suitable hosts, such as aronia (Aronia melanocarpa), for which risk assessment has not yet been established. Both laboratory bioassays and field monitoring were conducted to assess the susceptibility of aronia to D. suzukii. No-choice bioassays were conducted on damaged, destemmed, and undamaged aronia fruit. Field infestation was assessed using yeast sugar traps for adults and fruit samples for larvae during the 2015 growing season at three farms in south-central Wisconsin. In bioassays, D. suzukii successfully completed its life cycle in damaged and destemmed aronia, while undamaged aronia did not support larval or adult development. Adult flies which emerged from damaged aronia took longer to develop and weighed less compared to adults emerging from raspberry. In the field, adults were abundant throughout the growing season (late June–late September) and larvae were detected in low numbers in ripe fruit samples collected from late August through late September. After harvest, fruit sampled from the processing and packing line revealed low numbers of drosophila larvae. Overall, these findings suggest that damaged or destemmed aronia is susceptible to D. suzukii infestation, while intact fruit is resistant to D. suzukii. In addition, the bioassays suggest that aronia may serve as a suboptimal host compared to raspberry. These findings suggest the importance of preventing fruit damage before harvest and add to a growing understanding of how wild and specialty crops, such as aronia, may affect population dynamics of this invasive fly.

--
Katie Hietala-Henschell
Conservation Biologist
Endangered Species Program

Antidiabetic Effects of Aronia melanocarpa and Its Other Therapeutic Properties.

Banjart1, Misir A1, Savkin K2, Jokic S1, Molnar M1, De Zoya HKS3, Waisundara VY3.

Author information

Abstract
Diabetes is a global pandemic which warrants urgent attention due to its rising prevalence and economic burden. Thus, many alternative therapies are being researched for antidiabetic properties, given the inefficacy of current medicinal treatments. From this perspective, Aronia melanocarpa or black chokeberry has been investigated for its therapeutic properties in many studies, especially for its ability to combat hyperglycemia-induced oxidative stress and the macrovascular complications of diabetes including cardiovascular disease. Though A. melanocarpa is native to the eastern areas of North America, it has been planted extensively in Europe and Asia as well. Several in vivo studies have displayed the antioxidant properties of A. melanocarpa berry juice and plant extract in rat models where oxidative stress markers were observed to have significant reductions. Some of the potent bioactive compounds present in the fruits and other parts of the plant were identified as (-)-epicatechin, chlorogenic acid, neochlorogenic acid, and cyanidin-3-galactoside. Overall, A. melanocarpa could be considered a good source of antioxidants which is effective in combating hyperglycemia-induced oxidative stress.

KEYWORDS: Aronia melanocarpa; cardiovascular disease; diabetes; oxidative stress; phenolic compounds
Fruits of Black Chokeberry Aronia melanocarpa in the Prevention of Chronic Diseases.

Jukova T1, Milcek J2, Skrovankova S3, Sumczynski D4, Sochor J5, Hlavacova I6, Snopek I7, Onsavova J8.

Author information

Abstract
In recent years, growing attention has been focused on the utilization of natural sources of antioxidants in the prevention of chronic diseases. Black chokeberry (Aronia melanocarpa) represents a lesser known fruit species utilized mainly as juices, purees, jams, jellies and wine, as important food colorants or nutritional supplements. The fruit is valued as a great source of antioxidants, especially polyphenols, such as phenolic acids (neochlorogenic and chlorogenic acids) and flavonoids (anthocyanins, proanthocyanidins, flavanols and flavonols), particularly cyanidin-3-galactoside and cyanidin-3-arabinoside, as well as (-)-epicatechin units. The berries of A. melanocarpa, due to the presence and the high content of these bioactive components, exhibit a wide range of positive effects, such as strong antioxidant activity and potential medicinal and therapeutic benefits (gastroprotective, hepatoprotective, antiproliferative or anti-inflammatory activities). They could be also contributory toward the prevention of chronic diseases including metabolic disorders, diabetes and cardiovascular diseases, because of supportive impacts on lipid profiles, fasting plasma glucose and blood pressure levels.

KEYWORDS: Aronia melanocarpa; bioactive compounds; black chokeberry; chronic diseases; prevention