



NORTH DAKOTA GRAPE & WINE ASSOCIATION

Summer 2022

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NDGWA Mission

“To carry out education, promotion, and extension of the art and science of viticulture and enology in North Dakota and surrounding areas including any and all agricultural, horticultural, and related purposes connected therewith.”



NDGWA

**CHECK US OUT AT
WWW.NDGWA.ORG**

Greetings from our President...

This spring I picked up trees from the soil conservation office and also received 150 grape vines, all which waited to be planted when the soil dried. Spring 2022 we had 10 inches of rain which made me think back to 2004 when I planted 700 vines the end of May and I had water in all the post holes. The grapes survived the winter in good condition in our area and it looks like another good crop this fall. So after all the worries this spring it looks like we are in for a good year.

Our annual meeting this year was a great success, with many interesting speakers. The wine competition was a lot of fun and I think everyone won!

Next year we plan on joining Montana and South Dakota in a joint meeting to be held in Miles City. This has been discussed for the last couple of years and we are closer to having that happen. I think we will have some very interesting classes from wine making to growing grapes.

With the price of gas and diesel fuel doubling in a little over a year, I was concerned our summer tourism season might be down from the past two years. However, I have noticed campers on the road and also in some of the RV parks. Even with high gasoline prices, we will have another great tourist year. Lots of interesting people traveling from one end of the country to the other and they all have a story.

I hope you all have a great year, enjoy the summer, and have a happy harvest when it gets here !

Rodney Hogen

Petiole Testing

As a benefit of membership, NDGWA members will receive three petiole tests for free.

The best time of the year to check the nutritional status of our vines is when the grapes begin to flower. Veraison is the other time. Bloom time sampling can be used to make in-season fertility adjustments, while sampling at veraison is used to evaluate one's overall fertility program.

Collect only one petiole per shoot. Each sample should consist of 100 petioles so the lab has sufficient material to test. For bloom time sampling, take the petiole closest to the cluster. At veraison, take the petiole of the last fully expanded leaf. Wrap the samples in a dry paper towel (NOT PLASTIC) and mail to:
AgVise Laboratories
PO Box 510
Northwood, ND 58267

Include a note with your name, the grape variety, sampling date, and a request for a "complete tissue analysis including total nitrogen". Identify yourself as a NDWG member, and AgVise will bill the organization. If you have questions, contact Greg Krieger, 701-430-0281.

How to collect petiole samples: [Information from University of Minnesota](#)
YouTube video on petiole sampling.
The cost for petiole testing is \$32.00 each.

Considerations for Producing Red Hybrid Grape Wines



By now, most northern winemakers realize that hybrid grapes differ from *Vitis vinifera* in that they typically have more acid, more sugar and less available tannin than *vinifera*. This leads potentially to overly sharp, high alcoholic wines with less structure than we'd desire. So what to do?

Lowering acidity

1. Harvest as late as possible while still allowing the vines enough time after harvest to harden off before a hard fall frost.
2. Use an acid reducing yeast. 71B is the old standard, but Lalvin C and especially Maurivin B will lower acidity even more. Four years ago with one of the NDSU experimental grapes, I made the same wine with 1118, QA 23 and Maurivin B. The Maurivin wine pH was a full tenth of a point lower after fermentation (3.46 compared to 3.56). GWKent is the only US supplier I've found for Maurivin B.
3. Use malolactic fermentation. It will further reduce acids. Some ML bacteria work best right toward the end of alcoholic fermentation and some work best with co-fermentation (just as soon as you see the beginning of the alcohol ferment).
4. Chill proof the wine. When wine is chilled down, some of the tartaric acid bonds chemically with potassium to form potassium bitartrate, AKA cream of tartar. We simply move our tanks outside in October or November after fermentation. Adding cream of tartar will hasten the process. If possible do it with a pH below 3.6 for a couple of weeks. This should lower both acid and pH during chill proofing.

Decreasing alcohol

1. Add water. Really! A modest addition of water can reduce the alcohol without significantly altering flavor or body of the wine.
2. Blend with a lower alcohol wine. Many Swenson cultivars are recommended for early harvest (Brianna and Kay Gray around 16³ brix for harvest. It's not immoral to add white wines to red wines.
3. Do both. The Fermcalc graphic shows a gallon of 14% ABV Marquette blended with a pint of 9% ABV Brianna and a pint of water, for almost a 2% drop in alcohol by volume.

	Property	Volume	Volume Units
Liquid 1	14	1	gallons (US)
Liquid 2	4.5	.25	gallons (US)
Blend	12.1	1.25	gallons (US)

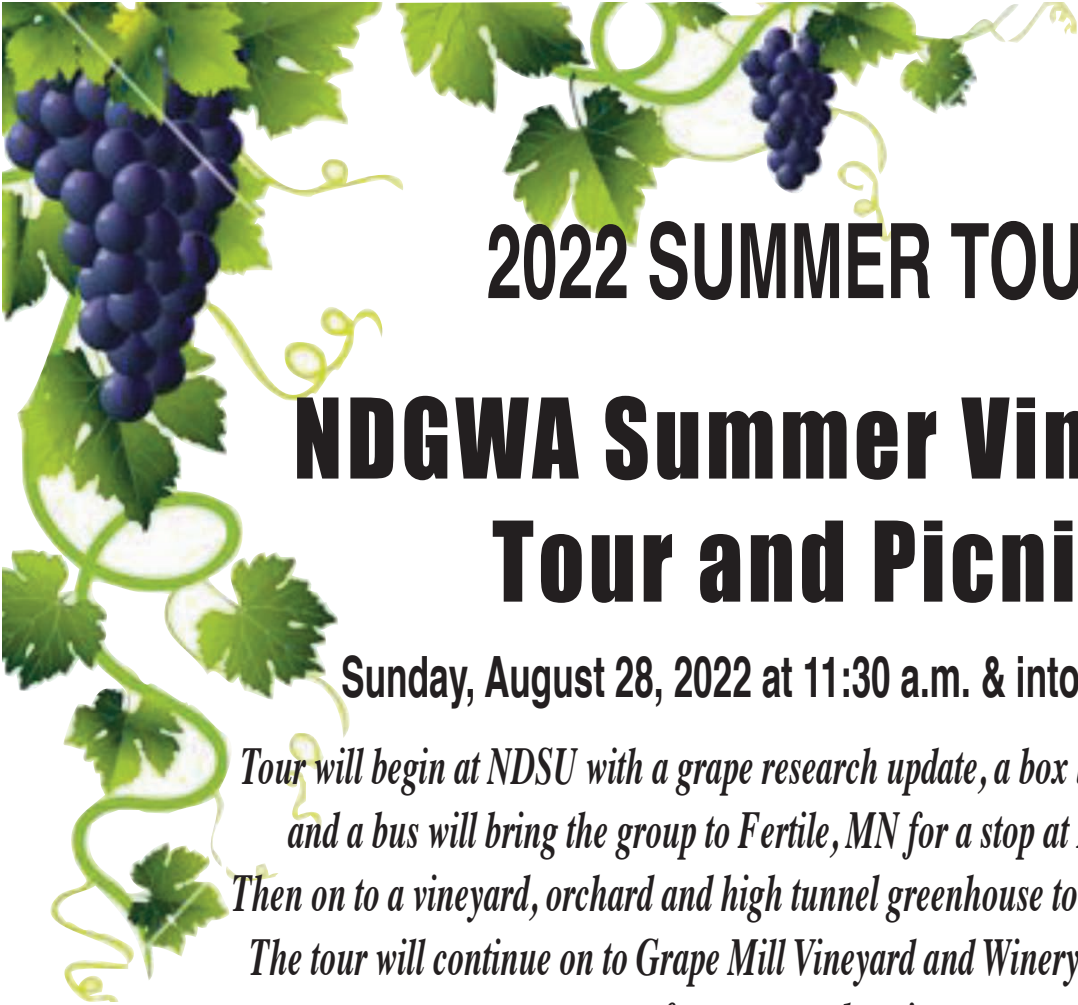
Increasing tannin:

This one is harder. Research is going on in several directions. Here are some things you can try.

1. Pre-ferment cold maceration. Some research has found that holding juice on skins after crushing for up to 10 days improves tannin extraction. Consider using GAIA, a non-fermentive yeast, during the soak (Scott Laboratories. Keep it cold!)
2. Press before fermentation right after cold soak. Really! Some evidence suggests that tannins become bound to the solids during fermentation.
3. Use Saignée— bleed off a portion of juice right after crush. Use it as a Rosé. This concentrates the remaining juice, increasing body, tannins and color.

Be a scientist and experiment with your winemaking by always using a control, so you can compare your standard method with a new protocol. Take good notes, measure carefully. And have fun! We use Scott Laboratory's Winemaking Handbook for most of our information and supplies. The new 2022 handbook is now available.

Bob Thaden, Tongue River Vineyard & Winery, Miles City, MT



2022 SUMMER TOUR

NDGWA Summer Vineyard Tour and Picnic

Sunday, August 28, 2022 at 11:30 a.m. & into the evening

Tour will begin at NDSU with a grape research update, a box lunch will be provided and a bus will bring the group to Fertile, MN for a stop at Bergeson Nursery. Then on to a vineyard, orchard and high tunnel greenhouse tour at Jerome Larson's. The tour will continue on to Grape Mill Vineyard and Winery in East Grand Forks for a tour and tasting.

The event will conclude with a catered picnic and the bus will return to NDSU in the evening.

TICKETS GO ON SALE JULY 28, 2022 AT EVENTBRITE.



NDGWA
2022

Summer Tour
COMING SOON!



NORTH DAKOTA
GRAPE & WINE
ASSOCIATION

Climate, Weather and Wine in North Dakota

F. Adnan Akyüz, Ph.D.
ND State University

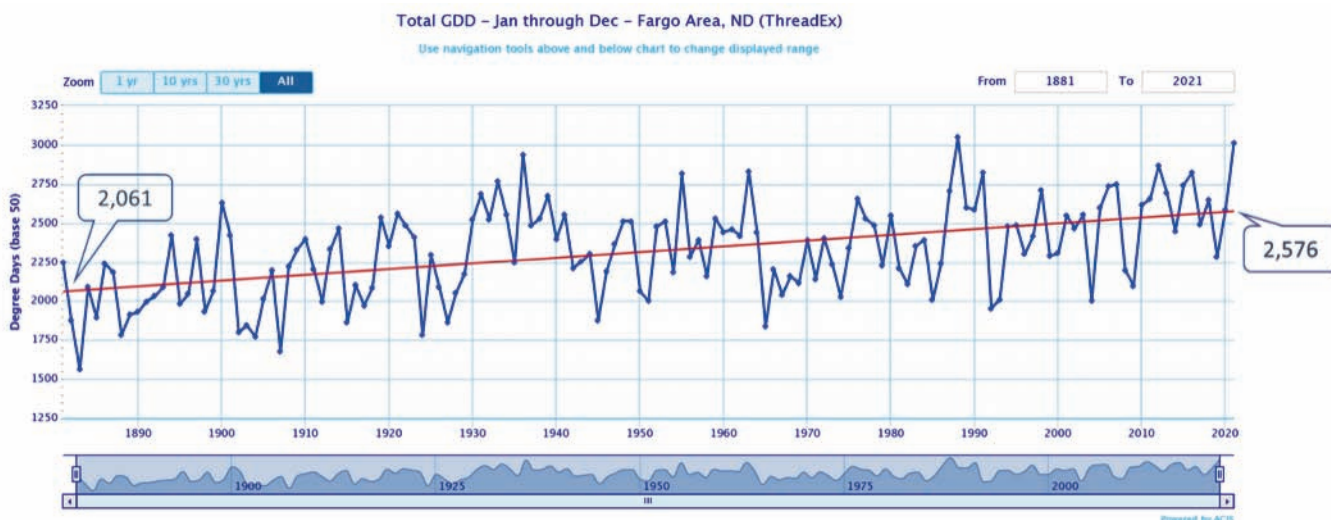
North Dakota is characterized by a semi-arid/continental climate with large temperature swings between the coldest and the warmest extremes. Our winters are dry and can be very cold. On average, we receive less than one inch of precipitation per month from November through February. Our record-low temperature of -60 degrees Fahrenheit came on Feb. 15, 1936. Our summer temperatures can be scorching too. The record-high temperature soared to 121 degrees Fahrenheit on July 6, 1936, the very same year when the state record low temperature was recorded. It is important to note that North Dakota can be warmer than Texas, whose record high temperature is one degree colder than the record high temperature in



North Dakota. These extreme climatic conditions make wine production in North Dakota more challenging than in other parts of the U.S.

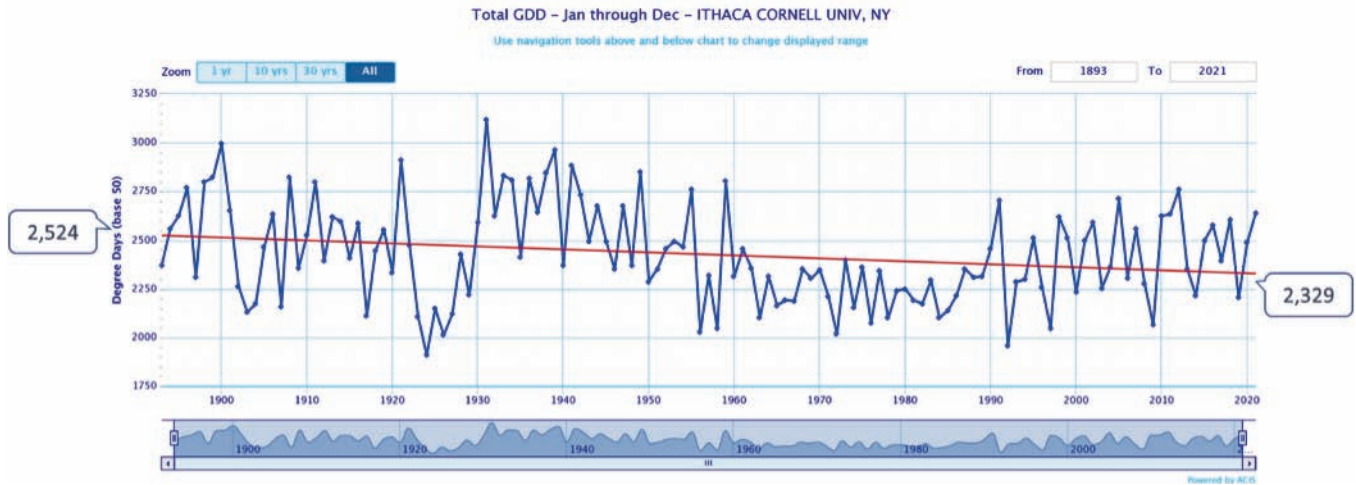
Grapes require, just like any other plants, certain heat unit accumulation above a threshold temperature to reach maturity. That threshold is 50 degrees Fahrenheit. Each day with an average temperature greater than 50 degrees, called grape

growing degree days (GDD), accumulates towards maturity. The warmer the temperatures are, the earlier the grapes will become mature. The following figure below shows the annual accumulation of grape GDD distribution for Fargo, for example. The red line is the linear regression line showing a strong positive trend (increasing on average) during the last century.

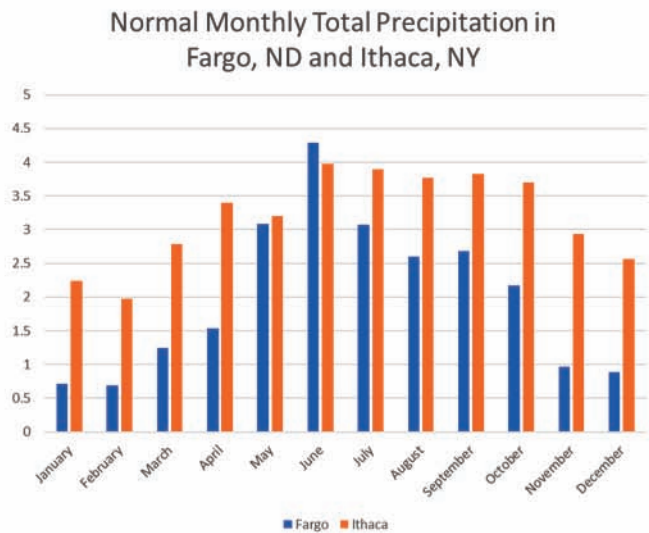
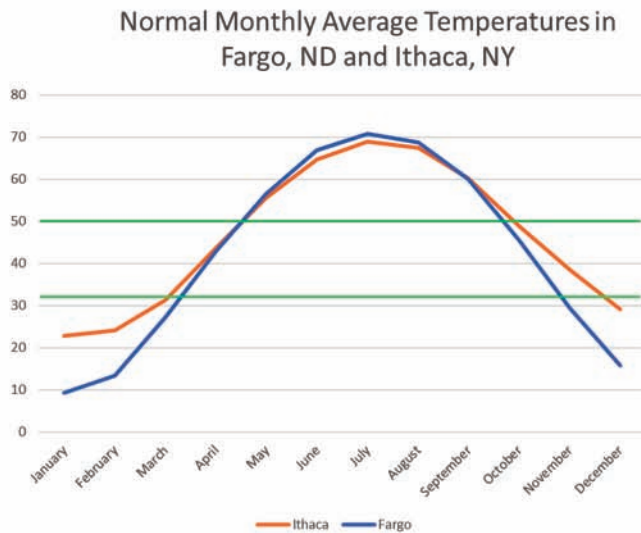


For comparison, I also added the grape GDD of a relatively comparable location successful in grape wine production, Ithaca, New York. Note the declining GDD trend in Ithaca, indicating Ithaca, on average, is getting colder. During the end of the century, Fargo accumulated nearly 250 more GDD than Ithaca. A careful glance between the two figures reveals that North Dakota's climate is becoming friendlier for grape wine production.

CLIMATE, WEATHER & WINE IN ND - CONT.



Furthermore, the following set of graphics shows a comparison between Fargo and Ithaca climates in terms of monthly average temperatures and precipitation. The line graph on the left-hand side includes monthly average temperatures in Fargo (blue line) and Ithaca (orange line). The two green lines mark the freezing temperature and the 50-degree grape base temperature. Notice that Fargo's summer temperatures are warmer than Ithaca,



The bar graph on the right-hand side above shows monthly precipitation averages in Fargo (blue bars) and Ithaca (orange bars). It indicates that Ithaca receives far more precipitation in all months, except in June, compared to Fargo.

Perhaps climate change gives North Dakota a better advantage in grape wine production compared to decades ago. With a careful selection of microclimates suitable for grape varieties, we should be able to see more local grape wines made with home-grown grapes on store shelves very soon.

Section 19 Vineyard - Wyndmere



Southeast ND has a new vineyard growing just south of Wyndmere. John and Jennifer Manstrom planted 150 Crimson Pearl this spring for 4e Winery out of Mapleton.

The Manstroms didn't initially think they would become grape growers, but after years of learning more about cold climate grapes, developing a relationship with Greg and Lisa Cook, drinking lots of wine from the area and learning about the need for ND growers, an idea caught on.

The vineyard is located just south of Wyndmere on Hwy 18 on virgin prairie land along the "shores" of Elk Creek. Its name comes from the section where the Manstroms live in Danton Township. Other names were bandied about, but they felt Section 19 Vineyard would be a way to connect their Centennial Farm to the geographical space where their vineyard is located.

The couple was looking for some ideas as they approached retirement age- Jennifer is the K-12 librarian and English 12 teacher in Wyndmere and John is propane sales and delivery for Dakota Plains Ag. They have three grown daughters, a son in law, a brand-new grandson, and their youngest, a son, is a senior in high school this fall.

Since their planting day in May, the vines have been growing well. They have lots to learn and are excited to be new members of the ND Grape and Wine Association. You can follow their adventures at Section 19 Vineyard on Facebook.



SunCatcherStudio.com

VINEYARD & WINERY News in Southeast ND

Wyndmere
Lisbon
Oakes

Prairiewood Winery - Lisbon

Cindy and John Steffes began their vineyard in 1999 with 200 vines after Cindy had experimented with and liked growing a few grape vines in her backyard. As a young mother, she began winemaking by learning with resources found online from UC Davis and taught herself. Her skills and her vineyard grew, and along with John's help, Prairiewood Winery as opened in 2006. A winery in ND was a novelty and many traveled to sample and buy their wines.

Prairiewood's mission, then, as now, was to produce grape wines made from grapes grown in ND in their own vineyard. The grape varieties that have been in place since 2006 when they expanded to 500 vines are Frontenac, Frontenac Gris, Marshal Foche, and Marquette. Marquette has been productive sporadically, with regrowth from the root about 50% of the time. One of the original varieties, Valient, was very hardy and regular producer but did not make a wine that appealed to their customers.

Perennial favorites are the wines produced from the Frontenac and Frontenac Gris, made in a slightly sweet style which appeals to the ND palate. Fruit wines have been on their menu, and a favorite is Raspberry, while the Blackberry is produced from juice bought in Washington which has been difficult to obtain due to poor crops there the past 2 years.

This year's grape crop is looking good and veraison should be right around the corner. After the cool, late Spring, they're hoping for some heat to ripen the grapes. Cindy and John market their wines at local craft show and vendor events, through local liquor stores and through Happy Harry's in Fargo. They can also be found on Facebook. Customers are welcome to stop by, just give them a call to let them know you're coming! (701)-683-5866



Hobby grower - Oakes

As yet un-named, this vineyard owned by Roberta and Jeff Forward, is located in Oakes on less than a half acre of land in their backyard. Now totaling 330 vines, it has been a garden project that has been the source of much learning, hard work, and at times, frustration. In 2021 a milestone and goal was reached as they produced a few hundred pounds of high quality Itasca grapes that actually made it into a commercial bottle of wine!

With an interest in wine and a desire to "grow good grapes", they attended the winter conference of NDGWA in February of 2014. The education and information presented and sharing and learning provided from many of the NDGWA members, led to the choice to go with various varieties of cold hardy grapes. In 2014, the initial planting of 180 vines included Petite Pearl (red, good wine), Sommerset Seedless (table grape for sharing) and Adalmina (white, disease resistant, good for blending) and the adventure began. Irrigation and a spray plan were implemented out of necessity in a few short years. In 2016, Crimson Pearl vines were added to the mix and in 2017, Itasca. Also planted over the years, were small numbers of other recently developed varieties, in an effort to establish what grows well in our location.

This year, 2022, saw the removal 150 of the vines, some of which were very susceptible to spray drift and had suffered repetitive and long term damage. In their place, a commitment to the Itasca grape variety was made. What remains of the original 180 vines are 20 Sommerset Seedless and 15 Adalmina. Roberta says, "The value in this endeavor has been the learning, the physical benefits, the friendships, and the fun of sharing about what we doing. I am by no means a commercial vineyard, but I do aspire to produce grapes of high quality and of enough quantity to establish a regular (although small) supply, to be able to sell to ND wineries." Here's to the continued journey!



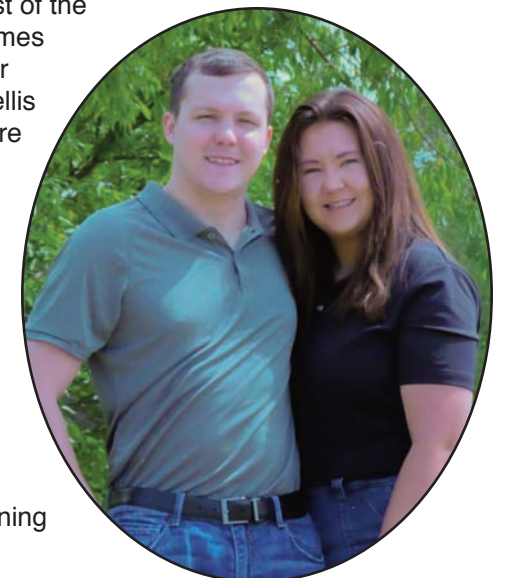
Itasca grapes

Hearthside Winery - Oakes

Nicholas and Haley Moen moved back to Oakes from Fargo in mid July with the goal of establishing a vineyard and winery. They have secured a lovely 40 acre parcel west of the Oakes golf course. This land has south/southwest facing hills overlooking the James River which affords it a beautiful view. Preparation for the vineyard will begin after soybean harvest this fall by seeding it to grass and installing end-posts for the trellis system. Their goals are to eventually reach 10 acres of irrigated vineyard, 1-2 acre of fruit trees, a winery complete with a large tasting room and a sizable outdoor seating area. Grape varieties selected to plant to begin with are Itasca, Frontenac, Frontenac Gris, Marquette, and La Crescent. Having attended the recent Germplasm Enhancement Update at NDSU, Nicholas and Haley look forward able to participate in the advancement of cold hardy varieties in North Dakota!

Haley graduated with a Master of Science in Plant Science this last spring, focused primarily on Plant Breeding. She has had the pleasure of working with many different plant breeding programs at NDSU. Her undergraduate degree is in Crop and Weed Science.

Nicholas's education background is mainly centered on content creation, videography, and video editing. He will be carrying out a lot of the social media, ecommerce platform and advertising for their winery, for which the projected opening is 3-4 years from now.



NDGWA Sponsored Event in Oakes, ND – June 10, 2022

Travel the World with Wine and Music
(this information adapted from promotional advertisements for the event held in Oakes)

Performing all music styles with panache and a sense of humor, A Touch of Class is known for their fresh interpretations of your favorites and soaring melodies in their originals.

Violinist/fiddler/vocalist, Tracy La Guardia, cellist/banjoist/vocalist Nick Rossi, and pianist/accordionist/vocalist, an Oakes native, Deborah Schmit-Lobis, performed at the Growing Small Towns Event Center in Oakes this past June. Deborah has toured with noted Tenor Andrea Bocelli and cumulatively, the trio members have appeared with luminaries such as Led Zeppelin, Linda Ronstadt, Kenny Rogers, Bob Hope, Peter Gabriel, Earth Wind & Fire, Michael Buble, and Sarah Brightman to name a few. These musicians have worlds of experience between them and they shared their talents with over 50 guests at this wine event in Oakes during the Irrigation Days summer celebration and All School Reunion.

Tracy, a sommelier in training, shared her passion for and knowledge of wines with us for during this event. She selected vintages from Spain, Italy, France, and Germany which were enjoyed while music inspired by those countries was played.

We also heard from Roberta Forward about her grape-growing journey here in North Dakota and tasted wines from two ND wineries, including a wine made from Oakes, ND grown grapes! We also visited via Zoom with her daughter, Tamara Forward Franscioni, who, with her husband's family, partakes in a viticulture and winemaking business in the Santa Lucia Highlands in California.

NDGWA, along with a monetary sponsorship, also donated wine glasses which guests were able to take home.

GRANT AWARD BETWEEN STATE OF ND DEPT. OF AGRICULTURE AND ND GRAPE AND WINE ASSN. FOR THE PERIOD JUNE 16, 2022 - JUNE 30, 2023

PROJECT PURPOSE

- What is the specific issue, problem or need that the project will address? This project will increase and promote awareness of growing grapes in our state, promote the research being done in our state to provide grape varieties that will make wine with unique flavors and characteristics, and promote wines made in North Dakota with North Dakota grown grapes.
- Why is the project important and timely? As NDSU is nearing its goal of developing grape varieties that will meet North Dakota's needs, the industry needs to promote grape growing and quality wine making.
- What are the objectives of the project? The objectives of the project are to educate the public regarding North Dakota's challenges growing cold hardy grapes, to publicize soon-to-be- patented North Dakota grape varieties and to promote these quality varieties for making quality wines.
- Goals
 - 1) To reach many people through the ND Rest Area Brochure Program.
 - 2) To promote the Grape and Wine Industry through our brochure, newsletter, Summer Tour and Tri-State Grape and Wine Industry conference and annual meeting promotions.
 - 3) To work with other groups / communities sponsoring grape and/or wine related events, promoting grape growing in North Dakota and North Dakota Wines.

GRANT OPPORTUNITY

The North Central Region Sustainable Agriculture Research and Education (NCR-SARE) Program is pleased to announce the 42 Farmer Rancher Grant projects recommended for funding for 2022. More than \$745,000 was awarded through this competitive grants program for farmers and ranchers who want to explore sustainable solutions to problems through on-farm research, demonstration, and education projects.

Read descriptions of these projects at <https://projects.sare.org/>.

The focus for each of the NCR-SARE grant programs is on research and education. Funding considerations are based on how well the applicant presents the problem being addressed, the project's relevance to sustainable agriculture in the 12-state North Central region, and how well it aligns with NCR-SARE's goals, among other factors specific to each grant program.

Here is the link to learn more about the grant and the application process:

<https://northcentral.sare.org/grants/apply-for-a-grant/farmer-rancher-grant/>

USING SWITCHGRASS TO HELP SHELTER VINEYARDS

Submitted by **Greg Krieger**

North Dakota is a windy state. The same natural force that makes North Dakota a powerhouse in renewable energy circles has deleterious effects as well. Tree rows planted decades ago for wind protection are quickly disappearing from the landscape. Although beautiful, trees require a lot of room, take several years to mature, cast shade for a long ways out, and their roots spread far and wide, removing a lot of water. As an alternative to trees, or as an addition to them, I propose that grape growers begin to utilize plants such as switchgrass for wind protection around their vineyards.

Switchgrass is an attractive, well-behaved, native, warm-season, tall-grass species. The stems stay upright all winter, creating an excellent snow fence in addition to providing wildlife cover. The seeds provide food to many species of wildlife such as pheasants, quail, doves and songbirds.

Although air movement through a vineyard helps reduce fungal disease by drying fruit and foliage, slow moving air masses next to the ground, known as air inversions, can deliver harmful herbicides to highly vulnerable grape vines. One herbicide-damaged vineyard I visited was perhaps a hundred yards away from the wheat field where the herbicide drift originated. The well-managed vineyard was on a low vigor site, and in last year's drought, it didn't even have enough foliage to obscure the trellis wires (excellent sun exposure and fruit quality most years, however!). As expected, the grape row near-

est the wheat field had the worst damage. What surprised me, however, was the drastic stair-step-like reduction in damage from that row to each succeeding row downwind. I don't know whether the reduction in damage from that tiny amount of foliage was due to the air mass slowing down (unlikely) or from those few leaves intercepting some of the chemical (more likely). At any rate, I am confident that had there been a row of five or six foot tall switchgrass alongside the outside grape row, the herbicide damage to the vineyard would have been reduced substantially.

My vineyard used to be fully exposed to the south. After I established a row of switchgrass along that side, it has been surprising how much snow, leaves and top soil blow in and settle along that side on a regular basis. Although my vineyard does slope to the north, since planting switchgrass, the south edge of it is frequently one of the last places around here where snow melts. A fruit tree nursery in New York advertises many of their woody plants as being hardy to 40 and even 50 below. I have tried growing some of those plants in my yard and they winter killed even though we didn't get that cold. I think the reason for the disparity is the difference in snowfall. Snow is an excellent insulator so anything we can do to increase snow cover in our vineyards is bound to help with winter survival.

In northern grape growing regions, heat units are usually in short supply. Reducing wind
Cont. on Pg. 10



SPRING SWITCHGRASS



WINTER SWITCHGRASS

SWITCHGRASS

Cont. from Pg. 9

speed at the soil surface raises the air temperature on sunny days. Switchgrass can help do that.

Every one of us should be trying to reduce our reliance on plastic. Those orange or green plastic snow fences do a nice job, however, switchgrass does as well or better and is much better for the environment.

In my experience, weediness has not been a concern with switchgrass. Some seedlings have gotten established on the bare soil south of my vineyard but I have not seen a single seedling over several years where we have lawn grass planted. Where quackgrass has appeared in my switchgrass row, it has easily been controlled with glyphosate applied in late April before the switchgrass comes out of dormancy.

Switchgrass can be grown from seeds or from divisions of established clumps. There are several named cultivars of switchgrass that can be purchased but I have found generic, run-of-the-mill plants very satisfactory. Since it is native, you may be able to find and collect some in pastures (ask permission first!) or in road ditches. Otherwise, I might know a guy who can fix you right up.

Brent Trela of Northern Crops Institute ***Working with ND Grape Growers and Wineries***

Northern Crops Institute (NCI) is a collaborative effort among Minnesota, Montana, North Dakota, and South Dakota to support the promotion and market development of crops grown in this four-state region. NCI is an international meeting and learning center that brings together customers, commodity traders, technical experts, and processors for discussion, education, and technical services. Situated on the campus of North Dakota State University, in Fargo, North Dakota, USA, this unique facility is only minutes from the farm fields that yield much of the world's food.

NCI's mission is to support regional agriculture and value added processing by conducting educational and technical programs that expand and maintain domestic and international markets for northern grown crops.

Brent C. Trela, Ph.D., Food Scientist with the NCI, was a Global Product Innovation manager and engineer for Ball. He led R&D in beverage filling and process technology, resulting in patented canning solutions for wine, water, cannabis-containing beverages, and other hard-to-hold products. Dr. Trela was a Professor of Enology at Texas Tech University, leading research and teaching, and an Extension Enology Specialist with Texas AgriLife Extension. He also developed enology curriculums at the University of California, Davis; Plumpton College, and the University of Brighton in the UK. He served as a senior advisor to the USDA in Armenia and the World Bank in the Republic of Georgia. As a winemaker, he has produced numerous award-winning wines in the United States, Australia, New Zealand, and Asia. Dr. Trela has extensive international experience in winemaking and enology research. He is a frequent speaker at national and international conferences. Additionally, Dr. Trela is active in numerous professional societies and industry associations, including an American Society for Enology and Viticulture director, eastern section.

**The above information obtained for the NCI website*

Brent states, " I look forward to working with the North Dakota industry and amateurs to improve the quality performance of the dominant (e.g., Marquette) and up-and-coming new varieties and their products while improving their familiarity and recognition with consumers.

In the coming weeks this summer I hope to meet with those closest to the ND wine consumer, the wineries and vineyard owners to delve into the North Dakota unknown. There is much to explore and capitalize on."

- How many vineyards, fruit producers, and their associated acres are here?
- Which varieties?
- How many and what size wineries?
- What is the average price per bottle?
- How best to serve these interests?
- North Dakota climate fruit and wine webinar series?
- In-depth topics?
- Reviews?
- Audience experience appropriateness?
- How to best integrate, and collaborate with available, popular, and underutilized resources in other states?

NDSU Grape Germplasm Enhancement Project Viticulture and Enology Update

**Submitted by Dr. Harlene Hatterman-Valenti
NDSU Horticulturist**

A virtual and in-person update was given June 28, 2022 on the viticulture and enology aspects of the accessions at the Fargo and Minot nurseries. The update started with Dr. Richard Horsley explaining accession advancement processes for barley. This was followed by Mark Jurik explaining some of the history behind the Northern Crops Institute and the mission of NCI.

Dr. Harlene Hatterman-Valenti followed with a presentation comparing the fruit yield and quality of the top 18 accessions from the Fargo nursery in comparison to 'Marquette' the main standard used at Fargo. All were from crosses made from ND parents. All but one had larger clusters than 'Marquette' and all but seven had larger trunk diameters compared to 'Marquette'. Utilizing the fruit quality measurements obtained by Dr. Brent Trella at crush, the total soluble solids ranged from 12.9 to 25.4%, pH from 3.28 to 3.85, and TA from 4.9 to 10.7 with only one accession over 10 gm/l. Dr. Hatterman-Valenti then compared the Minot accessions to 'Fron-

tenac' and 'Frontenac gris' the two standards.

There were seven accessions with cluster weights similar to the standards and two that

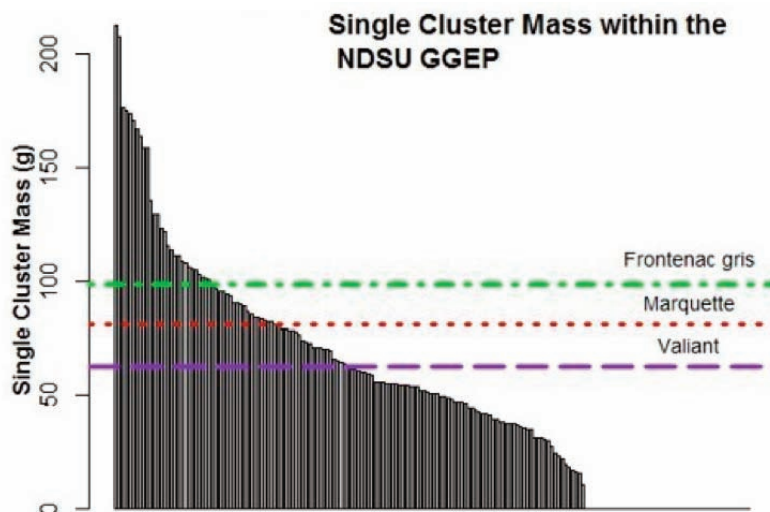
had clusters much larger than the standards. These two are the two accessions approved for pre-release. It was great to see that these two accessions produced large clusters both at Fargo and Minot.

Dr. Shana Forster and Chris Asmundson talked about the accessions at Minot and the vines that she has seen merit with and has started to propagate for further testing at the

Horticulture Research Farm.

The final speaker was Dr. Brent Trella who explained his microvinification process for the 368 samples and the sensory evaluation process. There were 10 accessions that received a rating of at least 17 on the modified Davis 20 point scale!

Discussion at the end of the meeting centered around propagation and starting to evaluate adaptability in other environments.



The above figure shows that more than 50% of the 2020 individuals at the Fargo nurseries had an average cluster size greater than Valiant with approximately 25% greater than Frontenac gris.

This shows that more than 50% of the 2020 individuals at the Fargo nurseries have an ave cluster size greater than Valiant with many > than Frontenac gris.



NORTH DAKOTA
GRAPE & WINE
ASSOCIATION

ND Grape and Wine Association
North Dakota State University
Department 7670, PO Box 6050
Fargo, ND 58108-6050



NORTH DAKOTA
GRAPE & WINE
ASSOCIATION

NDGWA COMMERCIAL MEMBERSHIPS

**COTTONWOOD
CIDER HOUSE**
1481 25th Street
Ayr, ND 58007

**RED TRAIL
VINEYARD**
3510 142nd Ave SE
Buffalo, ND 58011

**FLUFFY FIELDS
VINEYARD**
2708 21st St E
Dickinson, ND
58601

**KESSELRING
VINEYARDS**
5720 160th Ave SE
Kindred, ND 58051

**THE NORDIC
OAKS**
Barnesville, MN
56514

Join the North Dakota Grape and Wine Association!

Anyone interested in supporting the grape and wine industry in North Dakota is encouraged to join the NDGWA. Our members span the range from hobby growers and winemakers to commercial farmers and wineries. Even if you are not in the business but love wine and fruit and want to be a part of growing the industry in North Dakota, consider membership in the NDGWA. Use PayPal to join or renew your membership on-line.

More information can be found at <http://www.ndgwa.org/membership/>.