Advancing the American Grape Industries through Research

Donnell Brown, President
Agenda

- What is the National Grape Research Alliance?
- How do we advance research?
- How you can help?
VISION AND MISSION

Who We Are
The National Grape Research Alliance brings together American grape growers, processors, wineries and representatives of research institutions and cooperative extension organizations to improve our industry through science.

Our Mission
To align the priorities for research nationwide and across all U.S. grape sectors and to actualize scientific advances in the areas of greatest industry need, right now.

Our Vision
To achieve game-changing research for the U.S. grape and wine industry that protects against pests and diseases, fuels competitiveness and enables agility in response to shifting consumer tastes, changing climate and evolving resource availability.
Our History

2003

20 leaders of and stakeholders in the California grape and wine industry meet with the UC Davis Dept. of Viticulture and Enology to…

- Operationalize a way for industry and research communities to work collaboratively
- Develop a plan to address funding for cooperative research across grape industries at a national level
- From that meeting, the Winegrower’s Critical Research Investment Initiative (WCRII) is formed

2005

A new name is adopted: National Grape & Wine Initiative as the organization expands to involve stakeholders across all grape industries, grape-producing regions

The USDA Agricultural Research Service launches a biannual grape research workshop to provide a forum for government scientists and industry principals to collaborate on priorities and develop projects in real time. From 2007 on, this event has been organized in collaboration with our organization
Our History

2011
Take a formative role in the annual National Viticulture & Enology Extension Leadership Conference (NVEELC), the only event developed by and for viticulture and enology extension and outreach specialists to develop their skills and network with others nationwide; the tradition continues today

2007
Hire our first President to work full-time toward ensuring research needs are being identified and funded, policymakers educated, and scientific results reached industry via the extension and outreach community

2018
Change our name to the National Grape Research Alliance, putting research at the center of our name, as it is in our mission
Establish a Research Fund with which to seed projects that emerge from our research prioritization process, providing a mechanism for accelerating research and demonstrating the industry relevance of each need

NGRA has worked to secure more than $45 million in funding for grape research
Our Guiding Principles

- Fostering an atmosphere of collaboration
- Nurturing a community of grape and grape product researchers
- Tackling broad-scale researchable issues
- Working in harmony: addressing issues that unite us
- Promoting a culture to encourage industry-driven research

Nick Dokoozlian (E. & J. Gallo Winery) and Gan-Yuan Zhong (USDA-ARS)
Our Strategy

We identify and prioritize national-level research topics that affect the entire industry and are of a scope that no one segment of the industry could effectively impact alone.

We work to secure government, academic and private sector funding to accomplish these important research needs, including systematic, institutionalized increases where needed.

We strive to ensure research findings are made available to industry members through extension and outreach resources in the field.
How We’re Organized
NGRA Board of Directors

Regional Representatives
- California
- Northwest
- Southwest
- Midwest
- Northeast
- Southeast

Commodity Representatives
- Native/Hybrid Species
- Vinifera Species
- Table Grapes
- Juice Grapes
- Raisins
- Wine
- Rootstock/Nursery

At-Large Representatives
Currently 17 Members Serving
Research is at the heart of what we do. Our Research Committee, its themes and members are critical to our success.

Research Committee

• Research Committee Chair
• Four Research Theme Committee Chairs

Research Theme Committees

• Nine members per Theme Committee, representing industry and academia
• Determine research priorities in theme area and create projects and project teams to address them
• Participate actively in biannual ARS Workshop to ensure alignment between industry and government scientists
NGRA Research Themes

Research themes align with ARS National Programs and NIFA funding areas

- Genetics & Grapevine Improvement
- Integrated Production Systems
- Natural Resources & Environment
- Extension & Outreach
Support for Research

NGRA-sponsored projects

• Whether developed internally (e.g., by our Research Theme Committees) or independently, these projects address topics that meet core strategic NGRA research priorities

• NGRA works with Principal Investigators (PIs) to develop project proposals

• NGRA works to help secure matching contributions, coordinates letters of support and commitment of resources for PI

• NGRA remains engaged in an advisory capacity, helps to ensure outreach and extension
Support for Research

NGRA-funded projects
• Activated in the event no other funding is identified for a sponsored project
• Funding is provided by interested members not by NGRA as an organization; NGRA manages the funding and serves as liaison between the project and its funders

NGRA-supported projects
• Typically developed independently by researcher
• May be regional, industry-specific or address relevant, but not core NGRA research priorities
• Reviewed by Research Committee
• NGRA may provide letter of support and/or participate in project advisory committee

Dr. Luca Brillante,
Efficient Vineyard, launched as an NGRA-funded project
Research Snapshot:
SENSOR & MECHANIZATION

Collaboration between Cornell, Carnegie Mellon and UC Davis

Funding: Pilot Project
NGRA-sponsored and -funded pilot project launched in 2010

Five members of NGRA contributed more than $995,000 over five years

Objectives
• Develop sensor technology to accurately detect crop load, berry color and canopy vigor
• Develop software to analyze data
• Develop vineyard mapping system based on crop load, canopy, and soil data

Funding: Full Project
Secured $5.9 million in Specialty Crop Research Initiative (SCRI) funding from 2015-2019
Research Snapshot:
MARKER-ASSISTED BREEDING

Collaboration between Cornell University and USDA-ARS

Funding: Phase 1
NGRA-sponsored project with $4.5 million SCRI funding over 5 years

Main Objectives
• Streamline the process of developing new cultivars
• Identify marker-trait associations and convert them into new markers for biotic and abiotic stress tolerance, morphology and fruit chemistry
• Enable industry to understand the economic impact of adopting new cultivars

Funding: Phase 2
• Secured next-round funding September 1, 2017
• $6.6 million SCRI funding, 2017-2021
Research Snapshot:

**TRUNK DISEASES**

USDA ARS

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**SCRI TRUNK DISEASE PROJECT**

treeandvinetrunkdiseases.org

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**Objectives**

- Understand trunk diseases, the leading cause of vine removal in many parts of the U.S.
- Develop early wood-canker detection tools for symptomless plants, nursery stock and inoculum in the field
- Identify disease-resistant plant material
- Create a calculator by which growers can estimate the net annual returns of prevention and treatment across a vineyard's 25-year lifespan, at various disease control efficacy rates

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**Funding**

NGRA-sponsored project with $4.3 million SCRI funding for 5 years (2012-2017)

Concluded September 2017
### Research Projects Sponsored by NGRA

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Institution(s)</th>
<th>Funding Year</th>
<th>Project length</th>
<th>Grant Type</th>
<th>Grant Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>New USDA Water Unit in CA focusing on grapes, tree nuts and strawberries</td>
<td>USDA-ARS</td>
<td>2018</td>
<td>Perm.</td>
<td>Fed. funding</td>
<td>$10 m</td>
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<tr>
<td>VitisGen2: Application of Next-Generation Technologies to Accelerate Grapevine</td>
<td>Cornell, USDA-ARS</td>
<td>2017</td>
<td>4 yrs.</td>
<td>SCRI</td>
<td>$6.6 m</td>
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<td>Cultivar Development</td>
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<tr>
<td>Precision Vineyard Management: Collecting and Interpreting Spatial Data for</td>
<td>Cornell, Carnegie Mellon, UC Davis,</td>
<td>2015</td>
<td>4 yrs.</td>
<td>SCRI</td>
<td>$5.9 m</td>
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<tr>
<td>Variable Vineyard Management (Efficient Vineyard)</td>
<td>Penn State</td>
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<tr>
<td>New Detection, Research and Extension Tools for Managing Wood-Canker Diseases</td>
<td>USDA-ARS</td>
<td>2012</td>
<td>5 yrs.</td>
<td>SCRI</td>
<td>$4.3 m</td>
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<td>of Fruit and Nut Crops</td>
<td></td>
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<td>Accelerating Grape Cultivar Improvement via Phenotyping Centers and Next</td>
<td>Cornell, USDA-ARS</td>
<td>2010</td>
<td>5 yrs.</td>
<td>SCRI</td>
<td>$4.9 m</td>
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<td>Generation Markers (VitisGen)</td>
<td></td>
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<td>Vineyard Sensor and Mechanization Pilot Project (Precursor to Efficient</td>
<td>Cornell, Carnegie Mellon</td>
<td>2010</td>
<td>5 yrs.</td>
<td>NGRA</td>
<td>$1.0 m</td>
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<td>Vineyard)</td>
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<td>Northern Grapes: Integrating Viticulture, Winemaking, and Marketing of New Cold-Hardy Cultivars Supporting New and Growing Rural Wineries</td>
<td>Cornell, 10 additional</td>
<td>2011</td>
<td>5 yrs.</td>
<td>SCRI</td>
<td>$5.1 m</td>
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<tr>
<td>Scalable Solutions to Reduce Water Use and Salinity in California Winery and Food Processing Cleaning Operations</td>
<td>UC Poly</td>
<td>2010, 2012</td>
<td>6 yrs.</td>
<td>Block/AFRI Grants</td>
<td>$0.95 m</td>
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<td>Grape Consumption Associated with Healthier Eating Patterns in US Children and Adults</td>
<td>Private</td>
<td>2010</td>
<td>1 yr.</td>
<td>NGRA</td>
<td>$0.04 m</td>
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<tr>
<td>Developing Sustainable Vineyard Water Management Strategies for Limited and Impaired Water Supplies</td>
<td>USDA-ARS, UC Davis, WSU</td>
<td>2010</td>
<td>5 yrs.</td>
<td>SCRI</td>
<td>$2.5 m</td>
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<td>Grape Community of Practice: eViticulture, eXtension - articles.extension.org/grapes</td>
<td>Mississippi State</td>
<td>2009</td>
<td>5 yrs</td>
<td>SCRI</td>
<td>$0.42 m</td>
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Support NGRA, Support Research

Join an organization that’s committed to advancing the productivity, competitiveness and sustainability of the grape industry

• **Have a voice** in identifying and advocating for research the industry needs

• **Be part of a community** of grape growers nationwide that is actively working toward the future of our industry

• Ensure research is not only funded but **on track and meeting deliverables**

• **Support extension** of new scientific advances to the field
Support NGRA, Support Research

Your contribution…

- **Funds** the organization and its operation
- **Scales** to fit your organization and its drive to impact research
- **Can be earmarked** for particular projects, if you choose
- Is fully **tax-deductible**
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