



## *Marketing & Communications*

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In Q1 of 2021, CAHNRS Communications published 46 online articles that highlighted accomplishments in academics, research, student accomplishments, and Extension. CAHNRS and Extension websites received 1,254,965 total page views and garnered 708,512 new site visitors. We increased our audience size and engagement on social media, with a total of 273,427 impressions across three platforms.

### **TOP NEWS STORIES**

- [Wild Washington yeast strains might be beneficial for winemakers](#)—By **Lauren Paterson** | Published January 22 in Wine Business News, Kane’s Beverage News Daily, Wine Industry Adviser, Wine Industry Insight
- [WSU partners with Netherlands, Washington growers to improve orchard robotics, automation](#)—By **Seth Truscott** | Published February 4 in Good Fruit Grower, Innov8, Fresh Plaza, Fruit Growers News, HortiDaily, Basin Business Journal
- [Study finds foster youth lack critical financial skills](#)—By **Scott Weybright** | Published March 17 in Yahoo News, Siasat Daily, Hindustan Times, Moscow Pullman Daily News, Moms.com

## *Faculty Highlights and Awards*

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- **Junming Tang** (Biological Systems Engineering) elected to the National Academy of Engineering.
- **Carolyn Ross** (School of Food Science) won the **Sahlin Faculty Excellence Award for Instruction**.
- **David Gang** and **Anna Berim** (Institute of Biological Chemistry) were granted an US Patent for their invention on “Production of hydroxylated and methoxylated flavonoids in yeast by expression specific enzymes.”
- **Jill McCluskey** (School of Economic Sciences) is the incoming editor, and first woman editor, of the American Journal of Agricultural Economics, the top-ranking journal in the field of Agricultural Economics & Policy.
- Bon Appétit Magazine featured **WSU’s Cougar Gold Cheddar Cheese** in their January 14<sup>th</sup> article, “[I’m Here to Highly Recommend Canned Cheese](#)”, which led to an unprecedented surge in Cougar Gold orders—3,000 over the next five days, with more than 1,000 that Saturday alone!
- **Mark Pavek** (Horticulture) has been elected President of the Potato Association of America.
- WSU Extension Forestry earned three honors from the Association of Natural Resources Extension Professionals. In the video conference and webinar category, **Andy Perleberg, Brendan Whyte, Patrick Shults, Sean Alexander, and Kevin Zobrist** earned the 2021 National Gold Award for their Online Forest Owners’ Field Day, and **Whyte and Zobrist** received the Silver Award for their Forest Stewardship Webinar Series. **Kevin Zobrist** won the Silver Award in the newsletter/article series category for his Forester’s Notes column.
- **John Peters** (IBC) co-authored a paper that won a prestigious Cozzarelli Prize from the Proceedings of the National Academy of Sciences. “[Universal free-energy landscape produces efficient and reversible electron bifurcation](#)”, received the prize in the Physical and Mathematical Sciences class.

## *Grant Funding*

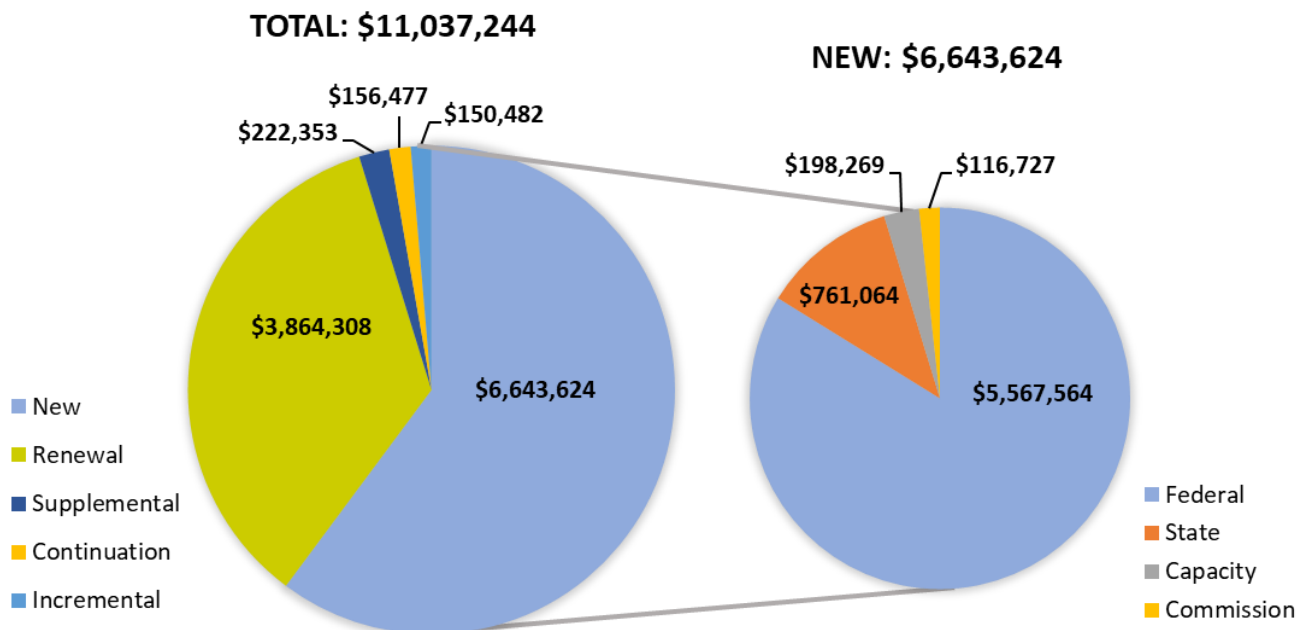
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CAHNRS Research and Extension faculty received **\$11M** in extramural support in the form of new and ongoing grants, contracts, agreements, and services rendered. A selection of new awards (with award total) is given below:

Notable Grants Include:

- **Karen Sanguinet, Tarah Sullivan, and Isaac Madsen** (Crop & Soil Sciences), “Interrogating pennycress natural and induced variation to improve abiotic stress tolerance and oilseed bioenergy crop resilience,” DOE-Office of Science-Systems Biology Research to Advance Sustainable Bioenergy Crop Development, \$1.3M (Multi-institution \$13M award led by Illinois State University)
- **Dave Brown** (Extension, AgWeatherNet), **Lav Khot** (CPAAS), **Joe Zagrodnik** (AWN), and **Lana Cohen** (AWN), “CPS: Medium: Field-specific weather-driven automated frost mitigation of specialty crops,” USDA-NIFA-Cyber-Physical Systems Program, \$1M
- **Maren Friesen** (Plant Pathology), **Chandra Jack** (PP), **Dave Huggins** (USDA-ARS/CSS), and **Tim Paulitz** (USDA-ARS/PP), “Linking functional and taxonomic diversity of diazotrophs under contrasting management regimes for enhanced crop productivity,” USDA-NIFA, \$500K
- **Dorrie Main and Ping Zheng** (Hort.), “CAP: Evaluation and validation of novel, huanglongbing resistant/tolerant citrus hybrid scion cultivars,” USDA-NIFA-Emergency Citrus Disease Research and Extension Program, \$449K (Multi-institution \$4.7M award led by UC Riverside)
- **Jenifer McIntyre** (School of the Environment, Washington Stormwater Center), “Clean cars toxicity of tire-derived chemicals to aquatic organisms,” U.S. Environmental Protection Agency- Hazardous Waste and Toxics Reduction Program, \$174K
- **John Stark** (Ext./Washington Stormwater Center), “Developing and refining source control inspection programs for businesses,” Washington Department of Ecology-Stormwater Action Monitoring, \$279K
- **Philip Bates and Helmut Kirchoff** (IBC), “Vegetable oil production in leaves of next generation crops within dynamic environments,” USDA-NIFA, \$229K (Collaborative \$500K award led by Donald Danforth Plant Science Center)
- **Michael Lubliner** (Ext./Energy Program), “Reimagining HVAC for new manufactured housing,” DOE- Office of Energy Efficiency and Renewable Energy, \$340K (including \$90K match from WA State Dept. of Commerce)
- **WSU Extension Youth & Families** received three grants from the USDA-NIFA 4-H Military Partnership Program, totaling \$277K. Projects are led by **Gary Varrella, Ashley Hernandez-Hall, and Oak Rankin.**

*Q1 Grant Funding*



## *Peer-Reviewed Publications*

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CAHNRS faculty published **253** articles in peer-reviewed journals and conference proceedings. These are cataloged in our Weekly Published Research Archive ([available here](#)). In addition, Extension faculty published **12** peer-reviewed Extension Fact Sheets, Extension Bulletins, and Technical Bulletins. A selection of notable publications is provided below with their 5-year impact factor.

- **Laura Bartley** (IBC), “Genomic mechanisms of climate adaptation in polyploid bioenergy switchgrass,” NATURE– Impact Factor 46.5 – 99<sup>th</sup> percentile in Multidisciplinary Sciences
- **Sarah Kostick, Soon Li Teh, Stijn Vanderzande, Cameron Peace, and Kate Evans** (Hort.), “Fire blight QTL analysis in a multi-family apple population identifies a reduced-susceptibility allele in 'Honeycrisp',” HORTICULTURE RESEARCH– Impact Factor 5.6 –99<sup>th</sup> percentile in Horticulture, 93<sup>rd</sup> in Plant Science, and 87<sup>th</sup> in Genetics & Heredity
- **Adekunle Adesanya, Mark Lavine, Laura Lavine, and Douglas Walsh** (Entomology), “Mechanisms and management of acaricide resistance for *Tetranychus urticae* in agroecosystems,” JOURNAL OF PEST SCIENCE– Impact Factor 4.6 – 99<sup>th</sup> percentile in Entomology
- **Jill McCluskey** (SES), “Predicting access to healthful food retailers with machine learning,” FOOD POLICY– Impact Factor 5.3 – 98<sup>th</sup> percentile in Agricultural Economics & Policy, and 93<sup>rd</sup> in Economics
- **Min Du** (Animal Science), “Plant extracts in prevention of obesity,” CRITICAL REVIEWS IN FOOD SCIENCE AND NUTRITION – Impact Factor 7.8 –98<sup>th</sup> percentile in Food Science & Technology and 97<sup>th</sup> in Nutrition & Dietetics
- **Kejia Gu**, (School of Food Science, PhD student), “Ochratoxin A and its reaction products affected by sugars during heat processing,” FOOD CHEMISTRY– Impact Factor 6.2 –96<sup>th</sup> percentile in Food Science & Technology, 94<sup>th</sup> in Applied Chemistry, and 89<sup>th</sup> in Nutrition & Dietetics
- **Thomas Power** (Human Development), “Maternal feeding style and child weight status among Hispanic families with low-income levels: A longitudinal study of the direction of effects,” INTERNATIONAL JOURNAL OF BEHAVIORAL NUTRITION AND PHYSICAL ACTIVITY– Impact Factor 7.0 –94<sup>th</sup> percentile in Physiology and 93<sup>rd</sup> in Nutrition & Dietetics
- **Wendy Mateo, Hanwu Lei, Elmar Villota, Moriko Qian, Yunfeng Zhao, Erguang Huo, Qingfa Zhang, Xiaona Lin, and Chenxi Wang**, (Biological Systems Engineering), “One-step synthesis of biomass-based sulfonated carbon catalyst by direct carbonization-sulfonation for organosolv delignification,” BIORESOURCE TECHNOLOGY– Impact Factor 7.3 – 96<sup>th</sup> percentile in Agricultural Engineering, 93<sup>rd</sup> in Biotechnology & Applied Microbiology, and 89<sup>th</sup> in Energy & Fuels
- **Maren Friesen**, (PP/CSS), “Social evolution and cheating in plant pathogens,” ANNUAL REVIEW OF PHYTOPATHOLOGY– Impact Factor 13.9 – 99<sup>th</sup> percentile in Plant Sciences
- **Robert Andrus** (School of the Environment), “Disturbance detection in landsat time series is influenced by tree mortality agent and severity, not by prior disturbance,” REMOTE SENSING OF ENVIRONMENT – Impact Factor 9.6 – 98<sup>th</sup> percentile in Environmental Sciences, 95<sup>th</sup> in Remote Sensing, and 94<sup>th</sup> in Imaging Science & Photographic Technology

## *Research, Extension Events, & Community Outreach*

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- **Center for Sustaining Agriculture & Natural Resources** and **Chris Benedict** (Extension, ANR) hosted **SoilCon** February 8-12, a week of virtual soil health presentations from 32 experts across WA and the nation. An effort of the WA State Soil Health Initiative and coinciding with Washington Soil Health Week, SoilCon was supported by a grant from USDA’s Western Sustainable Agriculture Research and Education program. 996 farmers/producers, agricultural professionals, academic researchers, and others from the U.S., Canada, France, United Kingdom, and India attended.

- **WSU Farmers Network**, led by **Haiying Tao** (CSS), coordinated numerous workshops and webinars including 2021 Winter Farm Workshops (Soil Fertility & Cropping System; Measuring & Managing Soil Health; Decision Making Using On-Farm Data); Washington Soil Health Initiative: Winter Work Sessions; Palouse Soil Acidity Workshop; Precision Ag Webinar Series; and Soil Organic Matter & Soil CEC Webinar
- **2021 Online Washington Forest Owners' Winter School** (Ext., ANR) was held February 27<sup>th</sup>. WSU Extension Forestry led this educational partnership with Green River College Natural Resources, which was supported by WA State DNR, USFS, King and Snohomish Conservation Districts, the Washington Tree Farm Program, counties statewide, and many more.
- **Snohomish County Extension**, led by **Kate Ryan**, presented **Agricultural Entrepreneurship and Farm Business Planning**, a 12-week Cultivating Success™ foundation course that helps new and current farmers gain skills in business planning and direct marketing.
- **WSU Tree Fruit Extension team** presented the Tree Fruit Winter Virtual Institute including webinar series, intensive workshops, recorded trainings for pesticide credits, and mini modules. Opportunities included Measure and Manage Soil Health for Productive Orchards, Farm Financial Literacy, Produce Safety Grower Training Course, tree fruit pest management, and much more.

### *Alumni & Development*

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- **Noel Perez**—WSU Viticulture & Enology alumnus ('20, *summa cum laude*), first-generation student, and 2019 Wine Spectator Student of the Year—recently created and launched a 2016 Petit Verdot under his own label, Calvario Cellars.
- An anonymous donor gifted \$50,000, doubled to \$100,000 through a match from the **Innovia Foundation**, to support the Child & Family Research Unit's work with K-12 students and their caregivers in isolated rural areas. This is the first private funding CAFRU has received.
- The **Washington Tree Fruit Research Commission** gifted \$828,611 for infrastructure at Prosser Irrigated Agriculture Research & Extension Center and Wenatchee Tree Fruit Research & Extension Center
- The **Scheetz Chuey Charitable Foundation** gifted \$250,000 to substantially grow the Carl F. Chuey Dahlia Virus Research Fund, which Dr. Hanu Pappu uses to support research on plant virology.