



Communications

In January of 2017, CAHNRS Communications Office published **19** Online Articles that highlight accomplishments in Academic Programs, Research and Extension. A selection is given below:

TOP NEWS STORIES

- [Unseasonable greetings for Washington state's vineyards](#) by **Linda Weiford** | Published Dec. 21, 2016 Appeared in Yakima Herald, Capital Press, Lewiston Morning Tribune, Fruit Growers News, KNDO, other outlets
- [Conference looks to rebuild historic cereal economy](#) by **Seth Truscott** | Published Jan. 3, 2017 Appeared in WSU News, WN.com, social media
- [Scientists discover perennial hybrid of wheat, wheatgrass](#) by **Seth Truscott** | Published Jan. 12, 2017 Appeared in KUOW, Oregon Public Broadcasting, Capital Press, Twin Falls News, Feed Navigator, other outlets
- [Public invited to help San Francisco's Dogpatch, Potrero Hill adapt to sea level rise, flooding, drought](#) by **Seth Truscott** | Published Jan. 17, 2017 Appeared in CAHNRS website, WSU News, College Majors
- [WSU sparks interest in vacancy-heavy ag career fields](#) by **Scott Weybright** | Published Jan. 24, 2017 Appeared in Growing Produce, Western Livestock Journal, WSU News
- [WSU wins grant for textile manufacturing innovation](#) by **Scott Weybright**/Walmart release | Published Jan. 20, 2017 Appeared in TextileWorld, Efficient Gov.com, Just Style, Environmental Leader, other outlets

SOCIAL MEDIA

Facebook	17 posts	450 likes	37,355 reached	2,753 fans (+0.7%)
		Top Post: Slow motion snow video		
Twitter	92 tweets	61,820 impressions	1,336 engagements	4,130 followers (+0.8%)

Faculty Highlights

- **Jim Moyer** (Associate Dean of Research) will serve on a 4-member international team to review the Plant Pest division of [Japan's National Agriculture and Food Research Organization](#).
- **Manoj Karkee** (BSE, CPAAS), **Qin Zhang** (BSE, CPAAS) and **Changki Mo** (WSU-TC) were awarded [U.S. Patent 14/849,729](#) for "Robotic systems, methods, and end-effectors for harvesting produce."
- Work from the lab of **Sindhuja Sankaran** (BSE) on precision and automated agriculture was highlighted in [Nature News](#). Dr. Sankaran uses drones to scan fields and gather information on plant height and density of leaves and branches. See full article [here](#).
- **Ana Espinola-Arredondo** (SES) was awarded [2017-18 Fulbright U.S. Scholar grant](#). This grant will allow Dr. Espinola to collaborate with faculty and graduate students in the School of Government at the Pontifical Catholic University of Chile.
- **Lav Khot** (BSE, CPAAS) gave an invited address at the 3rd international grape symposium, Table Grape Growers Association in Hermosillo, Mexico entitled "Role of low altitude remote sensing tools in growing wine grapes with less water."
- **Lindsey du Toit** (PP) gave the [J.E. Vanderplank Memorial Address](#) at the 50th Congress of the [Southern African Society for Plant Pathology](#), on Jan. 15-18th in Drakensburg, South Africa. The title of her presentation was "Spinach seed crop pathology research and extension at Washington State University: Engaging principles of the U.S. Land Grant Mission to enhance production of a minor acreage, high value crop." The meeting was attended by about 200 plant pathologists from southern Africa, as well as guest speakers from the US, UK, and the Netherlands.
- **James Harbertson** (VE) was invited to speak at the Cabernet Sauvignon forum in Margaret River, Australia on Jan. 24th.

Grant Funding

CAHNRS faculty received **\$2.9M⁺** in extramural support in the form of new/ ongoing grants, contracts, agreements and services rendered. A selection of federal awards (with award total) is given below:

- **Dorrie Main** (Hort.) was awarded a **\$740K** service agreement from **Cotton Inc.** to continue work on CottenGen – an open-source genomics, genetics, and breeding database resource for cotton research.
- **Hang Liu** (AMDT), **Ting Chi** (AMDT) and **Jinwen Zhang** (CMEC, VCEA) were awarded a **\$365K** grant from the **Wal-Mart Foundation** to investigate upcycling of post-consumer cotton waste for regenerated fibers using an environmentally friendly spinning process.
- **Zhiwu Zhang** (CSS) and **Aaron Esser** (Ext.) were awarded a **\$126K** grant subcontract (UI) from the **DOE** to develop non-food grade brassica biofuel feedstock cultivars with high yield, oil content, and quality for low input production systems.
- **Lav Khot** (CPAAS, BSE) and **Gwen Hoheisel** (Ext.) were awarded a **\$315K** grant subcontract (Michigan St.) from the **USDA-NIFA SCRI** program to develop solid set canopy delivery systems, which offer an efficient, sustainable and safer spray technology for tree fruit.
- **Hayley Chouinard** (SES), **Michael Brady** (SES, Ext.) and **Philip Wandschneider** (SES) were awarded a **\$250K** grant from the **USDA-NIFA AFRI Foundational Program** to Improve information framing with field experiments to increase participation of Hispanic farmers in conservation programs.

Publications

CAHNRS faculty published **41** articles in peer-reviewed journals and conference proceeding: these are cataloged in our Weekly Published Research Archive ([available here](#)). A selection of these publications, which appeared in journals that rank in at least the 90th percentile in their respective fields, is provided below with their 5-year impact factor.

DISCOVERY

- “Revealing the Molecular Structural Transformation of Hardwood and Softwood in Dilute Acid Flowthrough Pretreatment” ACS SUSTAINABLE CHEMISTRY & ENGINEERING – Impact Factor 5.3 – 94th Percentile in Chemical Engineering, **Bin Yang** (BSE)
- “Role of Alternate Hosts in Epidemiology and Pathogen Variation of Cereal Rusts” ANNUAL REVIEW OF PHYTOPATHOLOGY – Impact Factor 11.9 – 99th Percentile in Plant Sciences, **Xianming Chen** (PP)
- “Identification of two Meloidogyne hapla genes and an investigation of their roles in the plant-nematode interaction” MOLECULAR PLANT MICROBE INTERACTIONS – Impact Factor 4.3 – 91st Percentile in Plant Sciences, **Cynthia Gleason** (PP)

TRANSLATIONAL

- “Similar estimates of temperature impacts on global wheat yield by three independent methods” NATURE CLIMATE CHANGE – Impact Factor 19.2 – 99th Percentile in Environmental Sciences, **Claudio Stöckle** (BSE)

REVIEWS/BOOKS

- **Ana Espinola-Arredondo** (SES) and **Felix Munoz-Garcia** (SES) are editors of the volume dedicated to “Game Theory” in the Wold Scientific Publishing Company/Imperial College Press reference of natural resources and environmental policy in the era of global change. The article is available [here](#).
- Ruckelshaus Center Director **Michael Kern** is co-author of a chapter in *The Mediation Handbook: Research, Theory and Practice*. The Handbook features some of the leading names in the conflict resolution field, and is intended to be a resource to faculty, students and practitioners for at least a decade. Michael’s chapter, entitled “The Public Sector as Mediator: The Role of Public Institutions in Environmental Collaboration and Conflict Resolution,” was co-authored by William Hall, until recently Acting Director of the US EPA Conflict Resolution and Prevention Center, and now Director of the US Department of the Interior’s Office of Collaborative Action and Dispute Resolution. The book is available pre-order [here](#).

Research & Extension Events

- 71st Lake Chelan Horticulture Meeting held on Jan. 16th at Chelan High School in Chelan, WA. This event was co-sponsored by the Northwest Cherries, Pear Bureau Northwest, NCW Fieldmen's Association and the Okanogan Horticultural Association. It was one of a five-part series intended to provide regional growers the latest research based-information on horticulture, pest and disease management. Topics included: Soil quality on North Central Washington, Sunburn Physiology & Management, Weed Management & Best Practices, Current Status & Management of Brown Marmorated Stink Bug, and IPM for Psylla & Mite. Presenters from WSU included **Tianna DuPont** (Ext.), **Rob Blakey** (Ext.), **Lynn Sosonsky** (Weed Science), and **Betsy Beers** (Entomology).
- North Central Washington Stone Fruit Day held on Jan. 17th in Wenatchee, WA. Topics included Detecting & Managing Little Cherry Disease; Cherry Powdery Mildew; New Cherry Varieties; Cherry Training Systems; Cherry Horticultural Update; and others. Presenters from WSU included: **Andrea Bixby-Brosi** (Entomology), **Matt Whiting** (Hort.), **Claudia Probst** (PP), and **Betsy Beers** (Entomology). See news story in the Capital Press [here](#).
- North Central Washington Pear Day held on Jan. 18th in Wenatchee, WA. Topics included Pear Fertility, Using Organic Nitrogen Sources, Soil Water Relations, the Availability & Development of New Rootstocks, Best Practices for Weed Management, and IPM for Psylla & Mite. Presenters from WSU included **Bernardita Sallato** (Ext.), **Tianna DuPont** (Ext.), **Troy Peters** (BSE), **Amit Dhingra** (Hort.), **Lynn Sosonsky** (Weed Science), and **Betsy Beers** (Entomology).
- North Central Washington Apple Day held on Jan. 19th in Wenatchee, WA. Topics Included Mechanization, Geneva Rootstocks, Apple Fertility, Sunburn Management, Brown Marmorated Stink Bug, Post-Harvest Disease Management, Codling Moth, Fire Blight, Woolly Apple Aphid. Presenters from WSU included **Karen Lewis** (Ext.), **Vince Jones** (Entomology), **Betsy Beers** (Entomology), **Anchour Amiri** (PP), **Lee Kalscits** (Hort.), **Tianna DuPont** (Ext.), and **Robert Orpet** (Entomology).

Student News

- The Academic Programs Office launched their first **Spark** event at the WSU Tree Fruit Research and Extension Center. This new program is a partnership with multiple growers' associations and provides high school students with an introduction to the science, business, and research aspects of agriculture. The end goal is to recruit and prepare these students for lucrative, in-demand careers that address the shortage of agricultural professionals in Washington State. A total of 15 students from the Wenatchee area attended, which has already resulted in a student application and campus visit. Going forward, the Office plans to refine this pilot program to provide a template that can be used as a recruiting tool throughout the State. The next Spark event will be in the Tri-Cities or Yakima Valley (Contacts: **Kari Sampson**, Assistant Director of Recruitment and Retention; **Richard Zack**, Associate Dean of Academic Programs; and **Jim McFerson**, Director TFREC) (see CAHNRS press release [here](#)).
- **Rachel Wieme** (Ph.D. Student CSS), **Scott Carle** (Ph.D. Student CSS), **Elias Bloom** (Ph.D. Student Entomology), **Matthew Jones** (Ph.D. Student Entomology), and **Nicholas Muenth** (Ph.D. Student PP) were each awarded \$80-95K in AFRI-ELI Pre-Doctoral Fellowships from USDA-NIFA. Their advisors include: **John Reganold** (CSS), **Michael Pumphrey & Kimberly Campbell** (CSS), **David Crowder** (Entomology), **Bill Snyder** (Entomology), and **Scot Hulbert** (PP). **Carmen Blubaugh** (Entomology) was awarded a \$148K AFRI-ELI Post-Doctoral Fellowship from USDA-NIFA (Advisor: **Bill Snyder**, Entomology). These fellowships are awarded on a competitive basis. CAHNRS will prioritize increasing the number of proposals to this program and others that are submitted in 2017.
- This past fall semester the senior interior design studio (ID 425) constructed the LuxMotus Pavilion, a design build assignment. LuxMotus Pavilion was showcased on January 25th at 4:30pm in the WSU Fine Arts building. Instructor: **Saleh Kalantari**; Students: **Christie Andresen**, **Bashir Bazaid**, **Laura Filardo**, **Erin Golder**, **Lyndsey Greene**, **Amanda Helfer**, **Rachel Letterman**, **Frances Manley**, **Roxanne Meza**, **Carli Short** and **Sharla Thiesen**. (see SDC press release [here](#)).

- “IMPACTS: Achievements in Landscape Architecture” is a touring exhibition featuring projects, interventions, or proposals in which the work of landscape architects plays a prime role in shaping the built environment. The projects showcased in the exhibit are designed to inspire students and professionals by exposing them to various ideas, mediums, spaces and artistic visions. The exhibit was housed in the Carpenter Hall Gallery and ran through Jan. 26th (Contact: **Phil Gruen**, Director SDC).
- Auction of Washington Wine and WSU Partnership. VE and CAHNRS leadership met with the Auction of Washington Wines to discuss our partnership and future funding opportunities. The meeting was very positive meeting and we look forward to the future events and fundraising opportunities, the first of which will be held in early June. WSU VE, WSU Tri-Cities and Auction of Washington Wines will host a wine and music festival tentatively scheduled for June 10th on the WSU Tri-Cities Campus. This second annual event will support the Auction of Washington Wines efforts to support wine and grape research through WSU.
- Washington State Grape and Wine Research Review held on Jan. 30-31st. The Washington State Grape and Wine Research Program in an opportunity for researchers in viticulture and enology to share results of ongoing projects and present new proposals. The Program is supported by a combination of wine industry funds, state and federal research funds, and donations from the Auction of Washington Wines.