

AGRICULTURAL RESEARCH FOUNDATION

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The Agricultural Research Foundation is a nonprofit 501(c)3 corporation. Gifts and charitable bequests to the Foundation are deductible and can help accrue tax benefits.

<http://agresearchfoundation.oregonstate.edu>

AGRICULTURAL RESEARCH FOUNDATION

ANNUAL REPORT 2020-2021





President's Message

2020-2021 ARF Annual Report

Greetings from the OSU Agricultural Research Foundation (ARF). This annual report is a reflection of the Foundation's activities from July 1, 2020 through June 30, 2021.

As I write this article, we are near the end of 2021. I think back to 18 months ago when our vocabulary first started using the words COVID 19, Coronavirus, etc. At that time, we were led to believe that if we would quarantine for two weeks or four weeks the crisis would be over. My how much has changed!!

The mission of the ARF is to act as a holder of funds for Agricultural and Natural Resource Industries. We receive funds from donor partners and allocate the funds to researchers as designated. We invest these funds and with the strong economy our general fund has shown strong growth.

Agricultural Research at Oregon State University for the 2020-2021 year has thrived under very difficult challenges. With travel to research sites as individuals limited and collaboration with colleagues and growers primarily by zoom or

electronic medium, those in person contacts to exchange research results or ask the questions as to why results happened were sparse. Still, research to benefit the Agricultural and Natural Resource Industries happened. The 2020-2021 year must recognize the researchers and staff members for a job well done under very difficult circumstances. Thank you to all Staff at all levels of research for getting the job done.

This year I am pleased to announce that because of our strong growth the past year we were able to allocate \$623,060 to our Competitive

Grants Program. The amount awarded as a maximum grant was \$15,000. Many of the proposals funded were for beginning basic research projects and many have historically grown into larger projects to benefit Oregon.

Forty-one proposals were selected for funding beginning in January 2021. The results of past funded and completed Research Projects are available on the ARF webpage.

Our 2020-2021 staff included Dr. Dan Arp, Executive Director; Marty Kaye, Finance Director; and Charlene Wilkinson, Office Manager. Many hours of zoom meetings occurred between them to operate the business affairs of ARF.

It is our staff, past and future, that really makes ARF function efficiently. Thank you to all for your commitment to ARF. You help make the responsibilities of the

Officers and the Board of Directors much easier.

I was able to attend an OSU football game in October. There was a feel in Reser Stadium of returning to normal. This year we get to go to a bowl game! Normal activities will return.

Till next year. GO BEAVS!

Ralph Fisher, President

2020-21 Agricultural Research Foundation Directors

Today's ARF Directors and Officers, like the founders of the organization, are volunteers. They are chosen to represent the diversity of Oregon's agricultural and natural resource industries. They give generously of their time and expertise in setting policy and monitoring results from Foundation projects. The Directors meet bi-annually to review budgets, analyze Foundation activities of the past year, and plan programs for the next.

Officers

President

Ralph Fisher
Sublimity, Grass Seed

Vice Presidents

Lance Lyon
Aurora, Nursery Industry
Ron Hathaway
Klamath Falls, Professor Emeritus
Extension - Animal Science

Treasurer/Secretary

Chelle Davis
Lebanon, Banking

Directors

Robert Bailey
The Dalles, Tree Fruits
David Beck
Amity, Wine Industry
Barbara Bond
Amity, Professor Emeritus
Forest Ecosystems & Society, OSU
Stella Coakley
Corvallis, Assoc. Dean Emeritus
College of Agricultural Sciences, OSU
Tim Elbert
Central Point, Nursery Industry

Mike Hessel
Shedd, Fresh Market Vegetables and Melons
Kaety Jacobson
Newport, Fishing Industry
Lincoln County Commissioner
Tami Kerr
Corvallis, Dairy Industry
Josh Kvidt
Philomath, Internet
Elizabeth Levi
Portland, Attorney
Mike Macnab
Portland, Retired Non-profit Executive
Wheat Rancher
Pat Malone
Philomath, Christmas Trees
Benton County Commissioner
Jean McKinney
Wasco, Wheat Rancher
Todd Nash
Enterprise, Cattle Rancher
Wallowa County Commissioner
Bryan Ostlund
Salem, Commodity Commissions
Administration
Shelly Sorem
Corvallis, CPA



Edwin Stastny, Jr.
Malin, Irrigated Crops
Marty Vavra
LaGrande, Professor Emeritus
Rangeland Science
Bud Weiser
Corvallis, Dean Emeritus
College of Agricultural Sciences, OSU

Committees

Audit

Josh Kvidt, Chair
Chelle Davis
Tim Elbert
Shelly Sorem
Ralph Fisher, Ex-officio

Competitive Grants

Mike Hessel, Chair
Bob Bailey
David Beck
Barabara Bond
Stella Coakley
Tim Elbert
Ron Hathaway
Kaety Jacobson
Russ Karow
Josh Kvidt
Elizabeth Levi
Lance Lyon
Jean McKinney

Todd Nash
Bryan Ostlund
Ed Stastny
Marty Vavra
Ralph Fisher, Ex-officio

Executive

Ralph Fisher, Chair
Chelle Davis
Ron Hathaway
Elizabeth Levi
Lance Lyon
Bud Weiser

Finance

Ron Hathaway, Chair
Chelle Davis
Lance Lyon
Mike Macnab
Pat Malone
Ralph Fisher, Ex-officio

Nominations

Bud Weiser, Chair
Stella Coakley
Jean McKinney
Ralph Fisher, Ex-officio

Personnel

Lance Lyon, Chair
Chelle Davis
Ralph Fisher, Ex-officio
Ron Hathaway

Elizabeth Levi
Bud Weiser

Honorary Directors

Alan Sams
Dean
Staci Simonich
Exec. Assoc. Dean (from April)
Bill Boggess
Exec. Assoc. Dean (through March),
College of Agricultural Sciences
F. King Alexander
President (through Mar. 23)
Becky Johnson
President (from May 1),
Oregon State University

Emeritus Directors

Lane Borg
Ron Cameron
Ellen Egan
Larry Kaseberg
Ken Messerle
Sam Wade

Foundation Staff

Dan Arp
Executive Director
Marty Kaye (from Nov.)
Jianli Zhu (through Sept.)
Manager of Finance and Research
Charlene Wilkinson
Office Manager

The Agricultural Research Foundation

The Agricultural Research Foundation was established in October of 1934 to encourage and facilitate research in all branches of agriculture and related fields for the benefit of Oregon’s agricultural and natural resource industries. The Foundation is the custodian of privately and publicly donated research funds as well as grant funds from commodity commissions and other producer associations. These funds support work conducted in Oregon State University (OSU) facilities in the Corvallis area and throughout the state as well as some cooperative projects with university scientists in other states and around the world.

During the 87 years since its inception, the Foundation has provided leadership, incentive, and support for vigorous research programs across OSU agricultural and natural resource sciences. To date, the Foundation has received and managed over \$230 million in donor gifts and grants to support research on a wide range of topics. In addition, the Foundation itself has provided about \$10 million of its own funds, via its Competitive Grants Program, to initiate innovative research studies proposed by agricultural and natural resource scientists at OSU.

The founders of the Foundation envisioned a strong, collaborative partnership between OSU and Oregon’s diverse agricultural and natural resource industries. The Foundation has achieved that goal and works toward enhancements each year.



ARF Honor Roll

In Memory of Lyle Hammack (1910-1996)

The Honor Roll is intended to recognize individuals who have had a particularly strong influence on the Agriculture Research Foundation over an extensive period of time. Recently deceased individuals who fit that description have been recognized the last three years—Phil Walker, Arnold Appleby, and Roy Arnold. Past years have recognized early pioneers who were influential in creating the foundation for the ARF that has allowed it to grow to the organization that it is today. This year, we honor one of those early pioneers, Lyle Hammack.

Hammack was born in 1910 in Lostine, OR. He died in 1996. He attended Wisconsin Dairy School in 1928 and in 1937 became owner of Raven Creamery. He operated the business for 37 years. Hammack served in a variety of public service roles including the Oregon Dairy Products Commission, the Downtown Portland Kiwanis Club and the Portland Active Club. He received the Distinguished Service Award of Oregon State University in 1976.

Lyle Hammack joined the ARF Board of Directors in 1949, only a few years after the Foundation was started in 1939. He served on the board for nearly four decades. He was elected to cover dairy production and processing. Given where the Foundation is today, it is sometimes difficult to imagine the Foundation in those early years. Oregon State University was still Oregon State College. In 1944, the Foundation’s bank account held \$27,976.58. ARF funded projects numbered around ten and were funded at \$1,000 apiece. At Hammack’s first meeting in 1950, the Trustees voted to increase the number of trustees from 11 to 12. Schoenfield, the College of Agricultural Sciences Dean who had conceived of the Agricultural Research Foundation, retired from his position at OSU and moved to a position on the Board of Directors (establishing a pattern that has been repeated several times since 1950). At a 1955 Board meeting, Hammack noted the shift that had taken place in Oregon’s population from rural to urban and emphasized the need for getting the story of agricultural research before the urban people. That need continues today!



Hammack served as President from 1972 to 1988. At his first board meeting in 1973, Hammack oversaw the decision to authorize the sale of the Savery Farm. The farm was gifted to ARF in 1957. The directors authorized a committee to investigate the sale of the farm at or near the \$148,165 agriculture use appraised value. It would be another six years before the farm was sold in 1979 for \$558,250. For over four decades now, the proceeds from that sale have been supporting student activities in the College of Agricultural Sciences, including scholarships, student clubs, and undergraduate

research. Currently, the Savery Endowment provides about \$20,000 annually in support of student activities. By 1982, the Foundation was collaborating with the Experiment Station on 386 projects and disbursed \$754,582 for those projects. In 1983, under Hammack’s leadership, a committee was named to write an investment policy for the Foundation. By the time Hammack stepped down as President in 1989, the Foundation’s assets had grown to \$3,282,773. Upon his retirement, long-time Executive Director Dorothy Beaton commented, “Although Lyle was a very humble man, his

leadership was crucial in moving the organization forward. His even temperament was infectious during the meetings and his philosophy was that all members should voice their opinions and all ideas should be explored.”

We are pleased to honor Lyle Hammack for his many contributions to the Agricultural Research Foundation. His leadership helped build the foundation for the current ARF. He would be pleased to see how the organization has grown in the 33 years since he stepped down from his role as president of the Board of Directors.

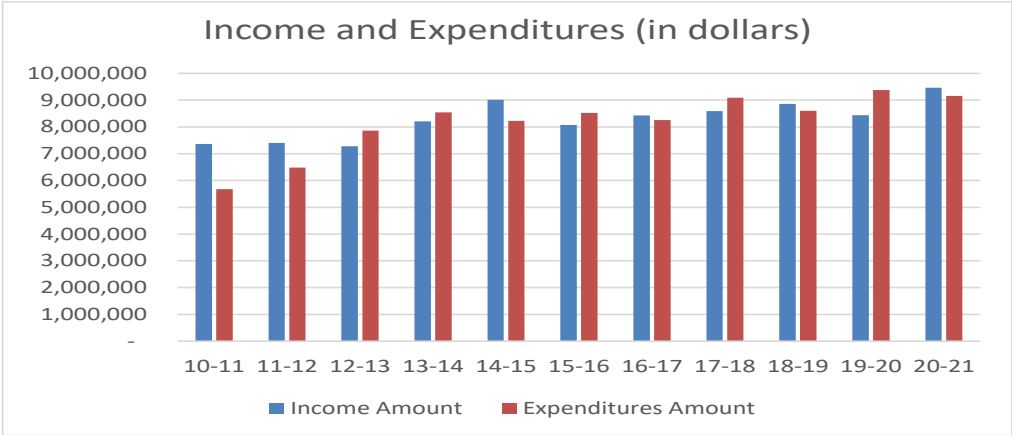
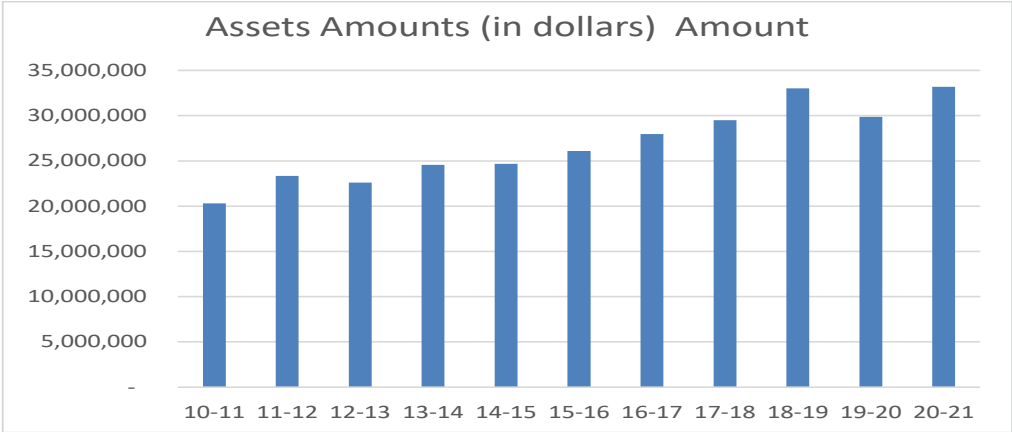
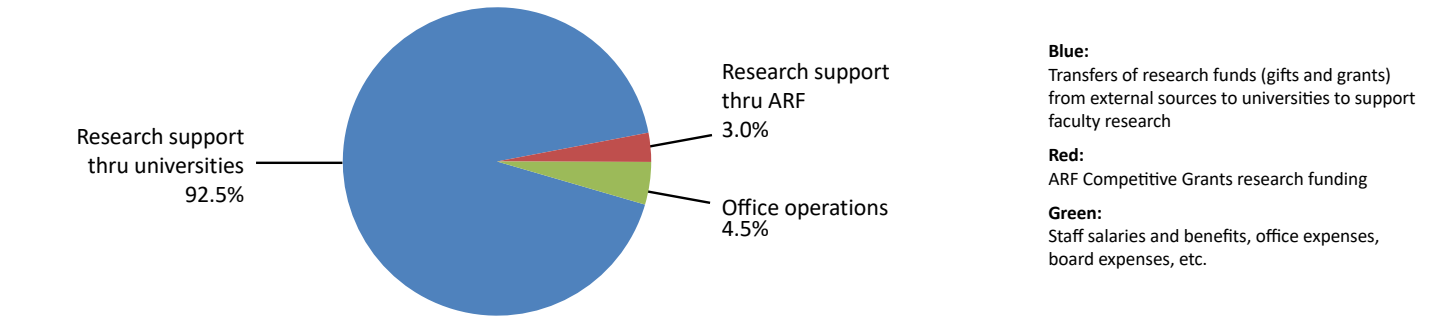
2020–2021 Agricultural Research Foundation Financial Summary

The Agricultural Research Foundation is in good financial health with stable cash flow, strong investment results, and continued revenue growth. Total assets increased \$2.9M to \$33.2M and total liabilities decreased by \$2.3M to \$10.7M. The Foundation’s general fund provided support for the Competitive Grants Program in the amount of \$621,060, including \$12,000 in support of undergraduate student research. General fund support for other special projects totaled \$15,500 - College of Agricultural Sciences (CAS) faculty and staff awards, financial support of the CAS Diamond Pioneer recognition program. In addition, the Foundation continues to keep operating expenses low. The Foundation generates its operational and special programs support funds through investments. To balance risk and return in recent years, the Foundation’s investment policy has allowed investment in dividend paying equities up to 25% of assets (20% goal with 5% allowed flexibility to account for trade timing differences). The company also approved the transfer of up to 2% of the bond portfolio into two different funds to account for the low interest rates on the fixed income portfolio; a multi-managed real estate income fund and managed real assets fund. The net rate of return on investment was 8.2%, 2.6% more than the rate of the previous year. At the June 30 year end, our investment portfolio had an unrealized gain of \$3,213,164, reflected in net assets as market value above the cost of investments. The financial statements and related financial information in this Annual Report are the responsibility of the Foundation management. The Financial Statements have not been audited for the FY 2021. Once the audit is completed (early next year) the annual audit will be sent to those that request it.

Marty Kaye,
Finance Manager



2020–2021 Agricultural Research Foundation Financial Charts



Statements of Financial Position As of June 30, 2021 (unaudited)	Agricultural Research Foundation
ASSETS	
Cash and Cash Equivalents	\$ 1,721,849
Investments	30,225,909
Contributions, Pledges and Grants Receivable, Net	1,187,203
Prepaid Expenses and Other Assets	53,215
Property and Equipment, Net	5,735
Total Assets	\$ 33,193,912
LIABILITIES	
Accounts Payable and Accrued Liabilities	296,374
Accounts Payable to Universities	4,544,638
Deposits and Unearned Revenue	5,826,519
Long-Term Liabilities	13,596
Total Liabilities	\$ 10,681,127
NET ASSETS	
Without Donor Restrictions	\$ 10,681,127
With Donor Restrictions	11,431,913
Total Net Assets	\$ 22,113,040

Statements of Activities As of June 30, 2021 (unaudited)	Agricultural Research Foundation
CHANGE IN NET ASSETS HELD WITHOUT DONOR RESTRICTIONS	
REVENUES	
Grants and Contracts	\$ 9,463,868
Investment Income, Net	1,497,855
Net Assets Released From Restrictions and Other Transfers	\$2,085,268
Total Revenues	13,046,991
EXPENSES	
Research Expenditures paid thru OSU	8,465,511
Research Expenditures paid thru ARF	253,655
Research Expenditures paid thru other Universities	24,759
Management, General and Development	408,669
Total Expenses	9,152,594
Increase (Decrease) In Net Assets Held Without Donor Restrictions	3,894,397
Beginning Balance, Net Assets Held Without Donor Restrictions	5,848,969
Unrealized Gains	937,762
Ending Balance, Net Assets Held Without Donor Restrictions	10,681,128
CHANGE IN NET ASSETS HELD WITH DONOR RESTRICTIONS	
REVENUES	
Grants, Bequests and Gifts	2,489,134
Investment Income, Net	35,394
Net Assets Released From Restrictions and Other Transfers	(\$2,085,268)
Increase (Decrease) In Net Assets Held With Donor Restrictions	439,260
Beginning Balance, Net Assets Held With Donor Restrictions	10,992,653
Ending Balance, Net Assets Held With Donor Restrictions	11,431,913
Beginning Balance	16,841,622
Increase (Decrease) In Total Net Assets	4,333,657
Ending Balance	\$ 21,175,279

ARF Competitive Grants Program Impacts

The Competitive Grants Program run by the Agricultural Research Foundation has been providing support to researchers at OSU for 43 years. The program is designed to encourage and fund research studies at OSU that will enhance Oregon’s agricultural productivity; the quality of its produce and products; and wise management and use of its natural resources—air, water, watershed, forest, fisheries, and wildlife. Not surprisingly, much of the support has gone to researchers with appointments in the College of Agricultural Sciences. But agriculture’s reach within OSU is not limited to one college and researchers from other colleges are encouraged to apply for funding and they are often successful in convincing the review committee composed of members of ARF’s Board of Directors that they should be funded. In our 2021 competition, 41 proposals were funded and while 30 went to professors in the College of Agricultural Sciences, eleven went to professors in other colleges. Those eleven projects provide an interesting look into the work in other colleges that falls within the mission of the Agricultural Research Foundation and its Competitive Grants Program.

Two projects were funded in the College of Forestry. Glenn Howe in the Department of Forest Ecosystems & Society is using genetic markers to improve breeding for resistance to white pine blister rust in Western White Pine. An economically and ecologically important conifer, Western White Pine has been severely impacted by blister rust caused by an introduced fungal pathogen. Genomic markers could help accelerate the development of resistant varieties. In the Department of Forest Engineering, Resources & Management, James Rivers is looking at the role of the blue orchard bee as a pollinator of fruit trees. The concerns in recent years about Colony Collapse Disorder in honey bees has led researchers to look for other managed pollinators, and the blue orchard bee is one of those alternatives. Dr. Rivers is evaluating the potential impact of simulated climate changed environments on the survivability of this alternative pollinator.



Over in the College of Veterinary Medicine, three projects were funded. Jean Hall in the Department Biomedical Sciences is investigating the selenium supplementation of beef cattle during pregnancy. While selenium is important to animal health, Oregon soils are often deficient in selenium leading to forages that are low in selenium. Specifically, Dr. Hall will determine if selenium supplementation leads to beneficial changes in immune cell gene expression. Dr. Hall’s work contributes to a rich history at OSU of studying selenium impacts on animal health. Dr. Lia Danelishvili, also in the Department of Biomedical Sciences, is working on a project to lay the foundation for developing a vaccine for Johne’s disease in ruminants. This slowly progressing disease is found in 68-91% of dairy herds in the US. Dr. Danelishvili’s work examines the efficacy of antigens from *Mycobacterium avium* for vaccine development. While projects with beef cattle and dairy cattle may not be surprising, you might not have expected to see a project on Dungeness crab. Nonetheless, that’s what Carla Schubiger in the Department of Biomedical Sciences is doing. Dungeness crab is the largest fishing commodity in Oregon. A



consequence of increasing levels of carbon dioxide in the atmosphere is the acidification of the oceans. The impacts of a more acidic environment on the Dungeness crab are not known. As a starting point, Dr. Schubiger is sequencing the genome of the Dungeness crab and will follow this with experiments to investigate changes to the expression of genes in more acidic environments. Another three projects were funded in the College of Engineering. In the School of Mechanical, Industrial and Manufacturing Engineering, Joseph Davidson is working on a prototype robotic system to remove off-types from grass seed. The system will consist of a conveyor to move seeds into a camera’s field of view, a Convolutional Neural Network to identify off-types, and a robotic system to physically remove the off-types. In the same Engineering School, Brian Fronk is investigating the drying practices used in the Pacific Northwest hops industry. After hops are harvested, they must be dried from about 80% to about 9% moisture content and this takes large amounts of energy. Fronk is investigating ways to more efficiently remove the moisture without impacting hop quality. In the School of Civil and Construction Engineering, Meagan Wengrove is studying dune



restoration on the Oregon Coast. Specifically, she is comparing the use of both native vegetation and introduced beachgrass to understand dune morphology, coastal protection and biodiversity protection. In the College of Pharmacy, Fred Stevens and Arup Indra were awarded a competitive grant. They are investigating natural products from Meadowfoam for their efficacy in producing more effective conjugates for protection from UV radiation on human skin pigment producing melanocytes. If successful, the work could lead to new formulation for sun-blocks and create a new market for Meadowfoam. Clearly, the mission of the ARF Competitive Grants program is being fulfilled in many of the eleven Academic Colleges at OSU. Principal Investigators in the most recent round of competitive grants are in six of those colleges. By including co-principal investigators and collaborators, two more colleges are represented, the College of Science and College of Earth, Atmosphere and Ocean Sciences. The impacts of the Competitive Grants program of ARF are indeed far reaching, not just in terms of the number of colleges at OSU that are represented, but also in terms of the diversity of projects that are funded.

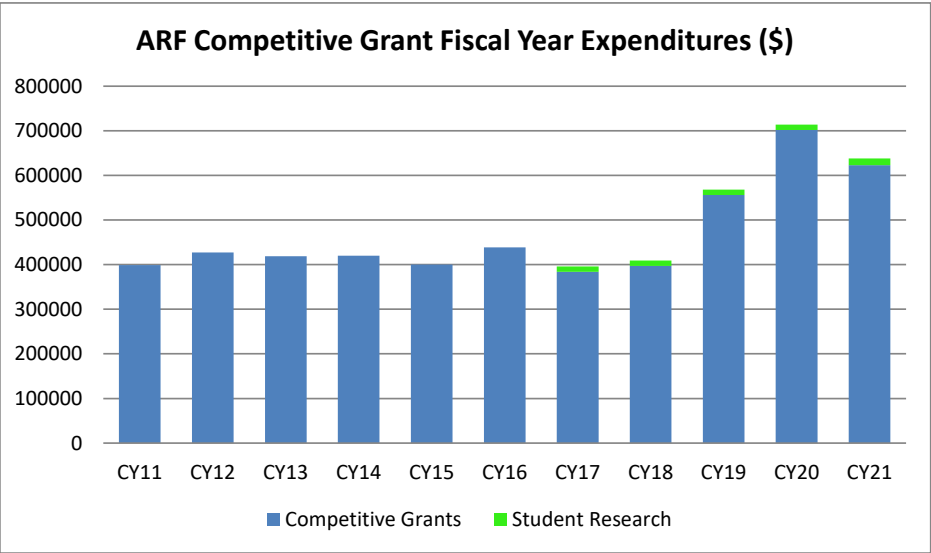
Competitive Grants Program

The Competitive Grants Program of the Agricultural Research Foundation is designed to encourage and fund research studies at OSU that will enhance Oregon’s agricultural productivity, the quality of its produce and products, and wise management and use of its natural resources – air, water, forest, fisheries, and wildlife. Our goal is to make small catalytic grants that help young scientists launch their research and help established scientists embark on new research directions or approaches. Grants for the 2021-23 period funded in fiscal year 2020-21 ranged from \$11,756 to \$15,000 (the grant maximum). The average amount of the 41 grants given was \$14,855. Grant total was \$623,060 (including \$15,000 for undergraduate research). Seventy-seven proposals were submitted for 2021-23 funding.

The funds available to support the Competitive Grants Program are discretionary funds generated by the Foundation’s investments. The level of funding available for the program is determined each year by the Board of Directors. Funding the Competitive Grants Program at the highest level possible is a Board priority. Following an assessment of general fund reserve levels during the 2020-21 fiscal year, the Board decided to provide \$600,000 to the Competitive Grants Program and added an additional \$20,060 to fully fund proposals with tie scores.

In 2016-17 the Directors decided to provide \$12,000 in competitive grant funding to undergraduate research in the College of Agricultural Sciences (CAS). Funding was increased to \$15,000 in 2020-21, consistent with the increase in the maximum size of grants. In this program, undergraduate researchers are paired with a faculty partner to do a specific research project. The ARF Executive Director works with the CAS Experiential Learning Program coordinator to manage this program.

A history of this Competitive Grants Program can be found at https://agresearchfoundation.oregonstate.edu/sites/agresearchfoundation.oregonstate.edu/files/arf_comp_grants_history_03-26-19.pdf



Competitive Grant Awards 2021–2023

RESEARCHER & UNIT	PROJECT
Christopher Adams Mid-Columbia Research & Extension Center	Development of monitoring tools and thresholds for natural enemies in pear systems
Nicole Anderson Yamhill County Extension	Pushing the yield barrier in red clover seed crops
Sergio Arispe Malheur County Extension	Towards Precision Agriculture for the Oregon Cattle Industry & Beyond: GPS & Accelerometer Sensors to Communicate Near-Real Time Cattle Behavioral Data
Serkan Ates Animal & Rangeland Science	Developing molecular markers to identify glyphosate-resistant weed seeds in cool-season grass seed lots
Judit Barroso Columbia Basin Ag Research Center	Evaluation of weed competition after harvest through soil water relations
Caio Brunharo Crop and Soil Science	Are fungal endophytes involved in the reduced response to herbicides in Italian ryegrass?
Jeff Chang Botany & Plant Pathology	Genomic Epidemiology: Revolutionizing Plant Disease Diagnostics for Oregon’s Growers
Man-Yeon Choi Horticulture	Bioactive proteins to develop biological-based molluscicides to control pest slugs
Lia Danelishvili Veterinary Medicine	Immunomodulatory and Vaccine Potential of <i>Mycobacterium avium</i> subsp. paratuberculosis Novel Antigens
Joseph Davidson Mechanical, Industial, & Manufacturing Engineering	A Prototype Robot for Sorting Seed
Sandra DeBano Hermiston Ag Research Center	Eastern Oregon Beneficial Invertebrate Database Project: Compiling Long-Term Datasets on Native Bees to Advance Research and Extension
Jennifer Durringer Environmental & Molecular Toxicology	Method validation for measurement of cannabinoids in fat from livestock samples generated from projects investigating use of hemp as a feed source
Bryan Endress Eastern Oregon Ag Research Center - Union	Monitoring and Restoration of Ecologically and Culturally Important Rangeland Resources
Brian Fronk Mechanical, Industial, & Manufacturing Engineering	Investigation of Energy Efficient Drying Practices in the Pacific Northwest Hop Industry
Kelsey Galimba Mid-Columbia Research & Extension Center	Developing molecular markers to determine dormancy status in Pacific Northwest cherry cultivars
Jean Hall Veterinary Medicine	Does selenium supplementation of beef cattle during pregnancy positively impact immune cell gene expression at parturition?
Glenn Howe Forest Ecosystems & Society	Tools for genomic breeding in western white pine: Improving resistance to white pine blister rust
Navneet Kaur Crop & Soil Science	Leveraging innovative insect pest management approaches for the management of red clover casebearer moth in Oregon’s clover seed crops
Jovana Kovacevic Food Innovation Center	Method development for <i>Listeria monocytogenes</i> profiling to assist the food industry with controlling transient and persistent contamination reservoirs: an artisan cheese facility case study
Alec Kowalewski Horticulture	Exploitation of a Novel Source of Endophyte-Mediated Disease Resistance to Improve Cool-Season Turfgrass Species

RESEARCHER & UNIT	PROJECT
Michelle Kutzler Animal & Rangeland Science	Developing a novel contraceptive vaccine against SPRASA for use in wild horses
Alexander Levin Southern Oregon Research & Extension Center	Ground-truthing Satellite-based Water Use Efficiency Estimates for Oregon Vineyards
Dani Lightle North Willamette Research & Extension Center	Evaluation of Bait Station Devices for Novel Cabbage Maggot Management Approach
Stephen Machado Columbia Basin Ag Research Center	Effects of long-term tillage managements on nutrient stratification in wheat-pea systems: Implications for soil health indicator identification
Andony Melathopoulos Horticulture	Survey of commercial blue orchard bee (<i>Osmia lignaria</i>) stocks in Oregon for exotic bees and arthropod parasites and predators
Marcelo Moretti Horticulture	Electric Weed Control in Blueberry
Hong Moulton Veterinary Medicine	Control of Vibriosis in Oyster Aquaculture Through Antisense Inhibition of lpxC Expression
Lloyd Nackley North Willamette Research & Extension Center	Soilless wasabi production to innovate an important niche crop
Cynthia Ocamb Botany & Plant Pathology	Powdery Mildew Risk Associated with Hemp Production in Western Oregon
Juliana Ranches Eastern Oregon Ag Research Center - Burns	Effects of biotin and vitamin B12 supplementation on performance of beef cows and their calves
James Rivers Forest Engineering, Resources & Management	An experimental evaluation of simulated climate change on population vital rates of a managed pollinator
Silvia Rondon Hermiston Ag Research Center	Assessing Genetic Material to Colorado Potato Beetle Using Traditional and Modern Science
Luisa Santamaria North Willamette Research & Extension Center	Battling Bothersome Botrytis: Investigating Alternative Cultural Control Methods for Ornamental Crops
Carla Schubiger Veterinary Medicine	Effects of Climate Change on Dungeness Crab
Fred Stevens College of Pharmacy	Protective function of Meadowfoam natural products and their derivatives against UV radiation on human skin pigment producing melanocytes: utilization as health-enhancing additives to cosmetic formulations
Christy Tanner Linn County Extension	Quantifying vole damage to Willamette valley seed crops with aerial imagery
Guojie Wang Eastern Oregon Ag Research Center - Union	Irrigation and Seed Mixture Effects on Fall Seeded Winter Grasses and Legumes in Eastern Oregon: Extending Grazing Season in Early Spring
Meagan Wengrove Civil & Construction Engineering	Exploring foredune restoration strategies with native and invasive plants to guide management practices on the Oregon coast
Nik Wiman North Willamette Research & Extension Center	Dietary routing of fatty acids as a mechanism to understand host use by Samurai wasp
David Wooster Hermiston Ag Research Center	Eastern Oregon Beneficial Invertebrate Database Project: Compiling Long-Term Datasets on Aquatic Invertebrates to Advance Research and Extension
Don Wysocki Umatilla County Extension	Developing applied nitrogen recommendations and nutrient extraction and uptake curves for industrial hemp grown for grain

Contributors 2020–2021

- Abel, Dana

Abrams, Lawrence

Adama US

Adams, Aislinn

Adams, Charles

Advanced Ag

Agropur

AK Fisheries Development FDN1

Albert, Dennis A.

Allardt, Mary

Alton, Gordon

American Vineyard Foundation

AMVAC Chemical Corporation

Antieau, Clayton J.

Appel, Lisa

Ball Horticultural Company

Bambu, LLC

Bandon Dunes LP

BASF Corporation

Bauman Seed Production, Inc.

Bayer CropScience LP

Beasley, Rick & Kelly

Bejo Seeds, Inc.

Belchim Crop Protection Canada, Inc.

Benton County Master Gardener Association

Berry, Jane Roffey

Biddle, Julie

Bierly, Kenneth F. & Linda R.

Bigham, Adam

Bilderback, Diane

Biodiversity Collective

Birth, Linda
- Blakeley-Smith, Matthew

Blue Mountain Wildlife

Bluhm, Wilbur L.

Bolte, Elizabeth

Border, James

Boyce, Penney

Bradford, Jason & Kristin

Brady, Steve

Braemar Charitable Trust

Brewer, Kathy M. & Dean A.

Bronstein, Shaina

Brooks, Paula J.

Brophy, Laura

Broshot, Nancy

Brown, Dennis

Brown, Mack

Brown, Richard

Bruhn, G & JW

Bruslind, Scott & Linda

Bryan Jr., Richard

Burgerville, LLC

Burgess, Louise Annette

Burke, Ashlee

Burton, Kelvin

Butler, Barbara

Butler, Glenna Kay

Caicco, Steven

California Walnut Commission

Carr, Gerald & Barbara

Carroll, George & Fanny

Carroll, Paul

Cartwright, Michael & Mary

Cascade Foods, Inc.

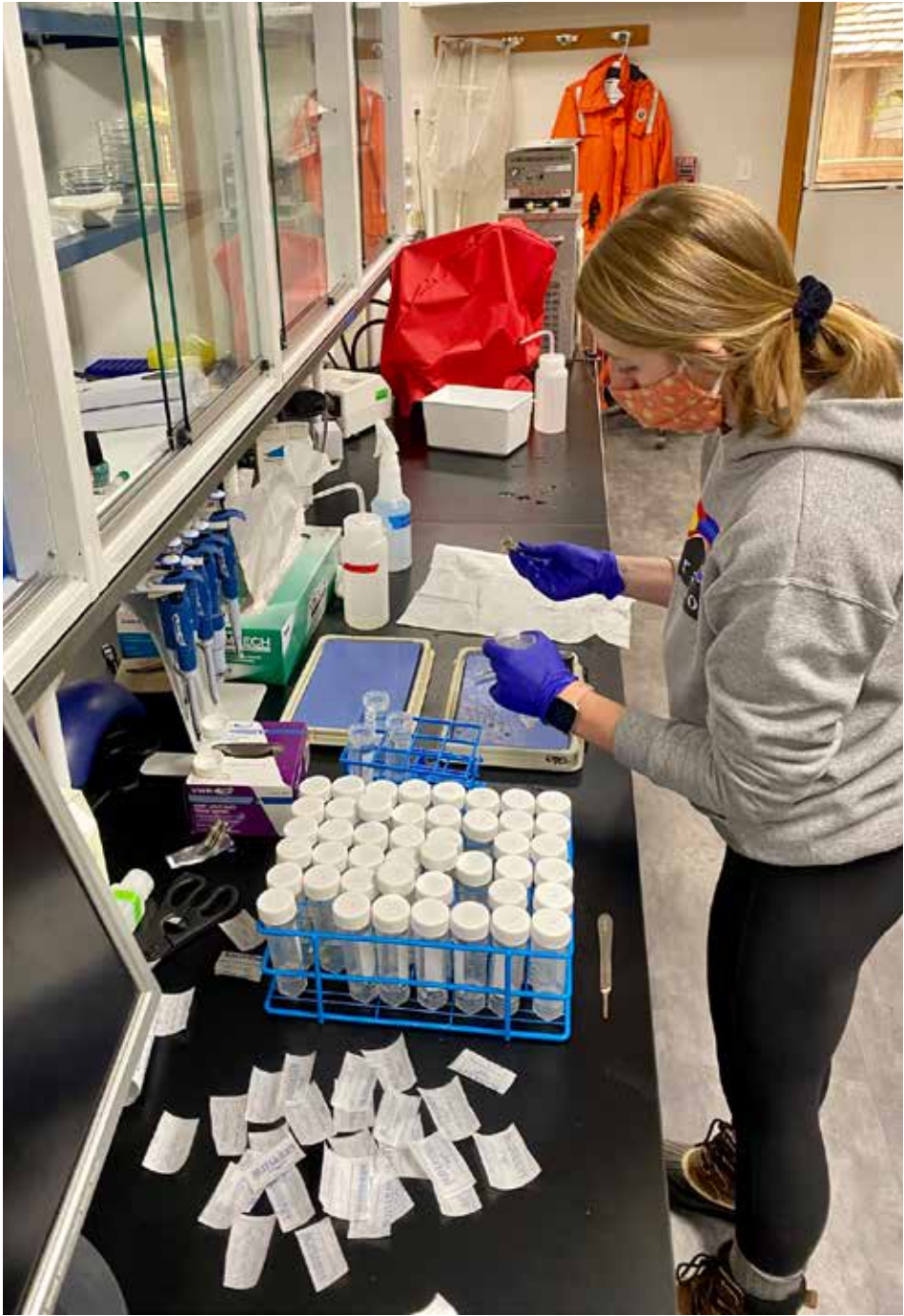


Central Coast Beekeepers
Central Oregon Seeds, Inc.
Certis U.S.A., LLC
Chambers, Kenton L.
Chapman, Nancy J.
Chevis, Cheryl A.
Chi, Guochen
Choi, Ilze
Christmas Tree Promotion Board
Coakley, Stella & James
Coleman Agriculture, Inc.
Collins Agricultural Consultants, Inc.
Columbia Beekeepers Assoc.
Columbia County Oregon Beekeepers
Columbia Gorge Fruit Growers
Columbia Seeds

Combs, Barbara J.
Conway, Lois
Cook, Jeff
Cook, Stanton A.
Cooper, David L. & Kathleen A.
Coos Bay Beekkeepers Association
Corteva Finance
County of Umatilla
Cox, Courtney M.
Crumb, Ellen A.
Cummings, Janis
Currier Farms
Custer, Robert S. & Geraldine R.
Dally, Elisabeth L.
Dancing Oaks Nursery, Inc.
Danler, Richard & Signe

Davis, John
DeHerdt, Sonja
del Carpio, David
Detwiler, Susan
DLF Pickseed
Dobak, David E.
Dry Farming Institute
Dryden, Linda S.
Duerksen & Associates, Inc.
Duggan, Michael
Duggan, Sharon
DuToit, Chaz & Sabine
E & J Gallo Winery
Early, Marie
Eastman
Egbert, Paul

Elliot, Gil
Ellison, Rick
Ellwood, Kenneth & Susan
Emerald Chapter Native Plant Society
of Oregon
Enza Zaden USA, Inc.
Erath Family Foundation
Expert Fish Pathology, LLC
Fagan, Stephanie
Fanara, Sandra
Ferriel, Jennifer
Ferriel, Roger
First Fruits Foundation
First Interstate Bank
First Key Consulting, Inc.
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In Memory of Ron Cameron

June 30, 1929 – October 7, 2021



Ron Cameron was born on June 30, 1929 and passed away on October 7, 2021. Ron Cameron joined the ARF Board in 1995 after retiring in 1994 from Oregon State University. He served many years on the Investment Committee (renamed the Finance Committee), becoming Chairmen of that committee in 2011.

Ron was a native of California. He received the B.S. at UCal-Davis in 1951 and PhD at the University of Wisconsin in 1955. He joined the Dept. of Botany and Plant Pathology in 1955 as a plant pathologist, primarily of orchard crops. He taught courses, advised graduate students, and served Oregon growers, as well as contributing knowledge on disease control nationally and internationally.

He was active in campus activities, including a large number of committees, Acting Assistant Dean of Graduate School, and President of the Faculty Senate. He served as Treasurer of the American Phytopathology Society for six years. He received the Earl Price Research Award in 1987.

After retirement, he was part owner of Seven Oaks Native Plants and began a business making and selling chocolate products. He was named a Diamond Pioneer after retirement.