Northwest Center
FOR SMALL FRUITS RESEARCH

THE NCSFR

2026 - 2027 RESEARCH PRIORITIES

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Blackberry Research Priorities

Revised Nov. 17, 2026

Numbered priorities are listed from most important to least important. Within each numbered priority, **all lettered priorities hold the same weight (i.e. A-E).**

1A)	Breed cultivars that are thornless, high-yielding, winter hardy, heat-resilient, machine harvestable, disease resistant, and have superior fruit quality and flavor
B)	Adaptation to heat stress and cold stress
C)	New methods and technology for improving on-farm labor efficiency, yield and quality
D)	Conventional and organic controls of fungal diseases (Rust, Blackberry Collapse, cane blight & Botrytis, Fusarium, and Phytophthora)
E)	Improve viability of organic and conventional fresh market production
2A)	Development of micronutrient sufficiency-management programs
B)	Virus management
C)	Control/management of most challenging perennial weeds
D)	Health benefit research
E)	Primocane management
3A)	Freeze damage prevention in caneberries
B)	Interactions of soilborne pathogens
C)	Water management
D)	Evaluate new insecticides/management strategies (conventional and organic) for insect pests, including Spotted Wing Drosophila

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Black Raspberries Research Priorities

Revised Nov. 17, 2026

Numbered priorities are listed from most important to least important. Within each numbered priority, **all lettered priorities hold the same weight (i.e. A-E).**

1A)	Breed cultivars that are high-yielding, winter hardy, heat resilient, machine harvestable, disease resistant and high brix
B)	Adaptation to heat stress and cold stress with regards to water management
C)	Control of fungal diseases (Verticillium, root rot, cane blight, and Botrytis)
D)	New methods and technology for improving on-farm labor efficiency, yield and quality
E)	Virus management
2A)	Control/management of most challenging perennial weeds
B)	Health benefit research
C)	Water management
D)	Interactions of soilborne pathogens
E)	Evaluate new insect management tools and strategies, including emerging pests

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Red Raspberry Research Priorities

Revised Nov. 17, 2026

Numbered priorities are listed from most important to least important. Within each numbered priority, **all lettered priorities hold the same weight (i.e. A-E).**

1A)	Develop cultivars that are summer-bearing, high-yielding, winter hardy, machine harvestable, disease resistant, virus resistant, and have superior fresh and processed fruit quality
B)	Management options for control of Spotted Wing Drosophila (including targeting systemic action on larvae)
C)	Mite management- New tools and MRLs, shorter pre-harvest intervals
D)	Labor saving practices – pruning efficiency, public/private technology partnerships, and harvester automation
E)	Foliar and cane diseases – ex. Spur blight, yellow rust, cane blight, powdery mildew, cane botrytis, etc.
2A)	Fruit rot, including pre-harvest, post-harvest, and for shelf life
B)	Cane management, including suppression, alternatives to paraquat
C)	Weed management focusing on horsetail, poison hemlock, wild buckwheat, nightshade, Canada thistle, watergrass
D)	Cutworm, leafroller management
E)	Soil fumigation techniques and alternatives to control soil pathogens, nematodes (dagger), and weeds
3A)	Maximum residue limits (MRLs) – residue decline curves, harmonization
B)	Nutrient management – revise OSU specs, consider timing, varieties, application techniques, calcium, nutrient balance
C)	Thrips life cycle and control strategies
D)	Viruses/crumbly fruit, pollination
E)	Understanding soil ecology (including biology, nutrient balance) and soil-borne pathogens and their effects on plant health and crop yields
F)	Alternative Management Systems to reduce cost of production: Fruit yield per lineal foot of bed, planting densities, row spacing and trellising
G)	Pest management as it affects pollinators

H)	Irrigation management-application techniques including pulsing
I)	Management options for control of Brown Marmorated Stink Bug
J)	Effects of Fungicide and fertility programs on brix
K)	Season extension- improving viability of fresh market production
L)	Root Weevils
M)	Snail life cycle and management strategies

Red Raspberry Research Priorities

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New Speciality Research Priorities

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Haskap/Honeysuckle (*Lonicera sp.*), Bilberry (*Vaccinium myrtillus*), Five-Flavor Fruit (*Schisandra chinensis*), Gooseberry (*Ribes sp.*), Currants (*Ribes sp.*), Hardy Kiwifruit (*Actinidia sp.*), Lingonberry (*Vaccinium vitis-idaea*), Huckleberry (*Vaccinium sp.*), Chokeberry (*Aronia melanocarpa*), Elderberry (*Sambucus sp.*), Sea Buckthorn Berry (*Hippophae sp.*), Buffalo Berry (*Shepherdia sp.*), Goji Berry (*Lycium barbarum*)

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1A)	Pest management (e.g., sawfly on gooseberry), including weeds and available tools (Pesticide tracking, registration and re-registration issues for new up-and-coming crops)
B)	Cultivar Development: Germplasm collection for superior and/or rare genotypes (including bilberry (*Vaccinium myrtillus*), huckleberry (*Vaccinium membranaceum*), etc.), cultivar verification, yield/ quality improvement, resistance and nutraceutical traits, adaptation for Pacific Northwest environment, and introduction.
C)	Develop and/or improve production systems (how do we grow these crops?), frost protection
D)	Disease management of new specialty crops, eg: Phytophthora in Hardy Kiwifruit
E)	General postharvest handling and long-term storage
2A)	New product development, food processing issues, health claims-based marketing including nutraceuticals
B)	Evaluate the invasive potential of specialty crops i.e., Haskap
C)	Improving fruit quality in new specialty crops through management practices
D)	Pollination/fruit set
E)	Foliar diseases in Ribes (ex. White Pine Blister Rust)
3A)	Investigation of mycorrhizal associations in Huckleberry
B)	Currant fruit fly (also called gooseberry maggot)
C)	Nutrition of new specialty crops (fertilization)
D)	SWD management in Elderberry
E)	Harvesting and sorting efficiency for Elderberry
F)	Systemic Pathogen Tolerance, especially to Viruses.

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Blueberry Research Priorities

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1A)	Research to reduce labor costs (e.g. mechanical harvester, pruner, weed mat, genetics, fruit bruising, etc.)
B)	Biology and Management of diseases, especially viruses and their vectors, *Botrytis*, mummyberry, aerial gall, bacterial blight
C)	Management of Spotted Wing Drosophila
D)	Management/irrigation/chemigation, cooling, fertigation, water delivery, frost and heat protection, and the impact on fruit quality
E)	Pollination, fruit set, and bud set, including biotic and abiotic factors as well as new technologies
2A)	Improve or extend fresh market quality, controlled atmosphere packaging, physical covers or chemicals, post-harvest handling and cultural inputs
B)	Fertility and Biostimulant management
C)	Plant breeding/varietal evaluation
D)	Weed management, including herbicide resistance
E)	Organic production systems
3A)	Biology and management of arthropod pests while conserving natural enemy populations
B)	Grafting rootstocks
C)	Vertebrate management
D)	Food safety
E)	Research on nematodes, including development of economic thresholds and development of in-season control for nematodes

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Cranberry Research Priorities

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Numbered priorities are listed from most important to least important. Within each numbered priority, **all lettered priorities hold the same weight (i.e. A-E).**

1A)	New herbicides for control of priority perennial weeds (arrow grass, silverleaf, lotus, false lily of the valley)
B)	New insecticides that are effective using chemigation and alternative application methods (e.g., drones)
C)	Fungicides for fruit and foliar disease management
D)	Market expansion through nutraceuticals/health or sustainable practices
E)	Irrigation system to optimize frost protection and pesticide applications (e.g. Evaluate wireless frost alert and soil moisture units for use on cranberry farms)
2A)	Pollination, fruit set and pollinator health
B)	Vertebrate pest management
C)	Soil borne pest control (cranberry girdler and root weevil)
D)	Production systems for new planting and renovations, including new varieties and nutrient management
E)	Sanding systems and alternatives for new and established plantings

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Table Grape Viticulture Research Priorities

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Numbered priorities are listed from most important to least important. Within each numbered priority, **all lettered priorities hold the same weight (i.e. A-E).**

1A)	Evaluation of varieties to regional suitability, increase berry and cluster quality.
B)	Study canopy design to optimize pest and disease management, berry quality and yield.
C)	Develop an enterprise budget for table grape production.
D)	Nutritional and water management for different varieties and canopies.
2A)	Photosynthesis and carbon positioning under different canopy systems and varieties.
B)	Studying culture of galls in table grapes.
C)	Evaluation of rootstock on cultivar vigor, nutrition status, yield, and quality
D)	Effect of nematodes on vine growth.
E)	Freeze protection strategies, resilience to freezing events.

Table Grape Viticulture Research Priorities

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Strawberry Research Priorities

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Numbered priorities are listed from most important to least important. Within each numbered priority, **all lettered priorities hold the same weight (i.e. A-E).**

1A)	Develop and evaluate cultivars with processed and fresh market potential, including earlier and later ripening
B)	Soil fumigation and alternatives to fumigation
C)	Pre and post harvest weed control, including new chemistry to reduce resistance
D)	The use of plastic culture in strawberry production in Day Neutral and June bearing strawberry crops
E)	Biology and management of botrytis
2A)	Biology and management of powdery mildew
B)	Soil fertility and fertigation in all production systems (matted and plasticulture)
C)	Alternate production systems for economic efficiency, increased yield and cultivar management, including reducing harvest costs for conventional and organic production
D)	Greenhouse substrate production, including nutrient and disease management
E)	Management of Spotted Wing Drosophila
3A)	Mite management
B)	Post-harvest management of fruit
C)	Vertebrate pest management
D)	Management of root weevil
E)	Management of Day Neutral July production lull
F)	Cultural management practices to improve soil health

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Wine Processing Research Priorities

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Numbered priorities are listed from most important to least important. Within each numbered priority, **all lettered priorities hold the same weight (i.e. A-E).**

1A)	Incidence and measurement of wine components and their individual and combined impact on color, flavor, aroma and texture.
B)	Develop winemaking protocols to mitigate impact of environmental risk on wine quality (e.g. smoke, feedlot, hemp, freeze, heat effects, flavor, pH impact, and insects).
C)	Preventing sulfide and reduction compounds, minimizing stuck and sluggish fermentations including nutrient management.
D)	Impact, identification and application of native, novel yeast and bacteria (e.g. ML) for fermentation management.
E)	Incidence and control of *Brettanomyces, Pediococcus,* and *Lactobacillus* and other spoilage microbes.
2A)	Managing fruit from virus affected vines in the winery.
B)	Winery mechanization and automation technologies for large- and small-scale operations.
C)	Impact of alcohol on wine (e.g. flavor, sensory, alcohol reduction, low alcohol, etc.).
D)	Develop and evaluate organic and sustainable winemaking practices, e.g. wine processing, winery management, alternatives to sulfites, and utilization of value added by-products.
E)	Winemaking techniques, (e.g. pre-fermentation handling, cold soak, extended maceration, optical sorting, reducing alcohol).
3A)	Alternative methods to achieve temperature stability and wine chemical and microbial stabilization, including reduced sulfite use and use of sulfite alternatives.
B)	Understand and mitigate the effect of bunch rots on wine quality.

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Wine & Juice Grape Viticulture Research Priorities

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Numbered priorities are listed from most important to least important. Within each numbered priority, **all lettered priorities hold the same weight (i.e. A-E).**

1A)	Water, nutrient, and soil health management to optimize grape production and wine quality.
B)	Incidence, impact, vectors and management of leaf roll and red blotch.
C)	Climate change mitigation strategies for environmental stress (e.g. cold, heat/sun burn, smoke, and drought stress) as it pertains to grape, juice, and wine production.
D)	Biology and management of botrytis and powdery mildew.
E)	Development and evaluation of precision mechanization tools, and technology that reduce reliance on hand labor within the vineyard and processing facilities (e.g. canopy management, weed and pest management, crop management, sorting, MOG removal).
2A)	Evaluation of rootstock suitability for PNW production.
B)	Development and evaluation of organic, sustainable, regenerative farming systems.
C)	Biology and management of vineyard weeds.
D)	Biology and management of new or invasive pests (e.g. insects, nematodes, vertebrates
E)	Biology and management of trunk diseases/disease complexes.
3A)	Grapevine physiology related to yield, ripening, and quality.
B	Vine to wine evaluation of modern varieties
C	Enterprise budget for modern varieties