State of Oregon Annual Report for Calendar Year 2021 and 2024 W-6 Technical Committee

Gaurab Bhattarai

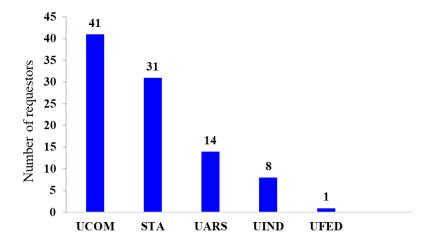
Oregonians continue to use the PI system extensively. Users include state and federal researchers, private seed companies, and private individuals. Oregon is a major user in the western region, along with California and Washington. Also, former Oregon state representative S. Mehlenbacher (Gaurab Bhattarai (current)) has a W-6 companion project, and research progress is reported here.

Progress Report:

Overall summary (2021-2024)

Title	Year 2021	Year 2024	Total
Number of species requested	194	136	330
Number of accessions requested	2,118	1,470	3,588
Number of orders placed (requestors)	64	47	111
Number of email responses	-	-	30
Bad email address	-	-	7
Email not available	-	-	2

Number of requestors by cooperator category.



STA U.S. state agencies and all universities

UARS Agricultural Research Service

UFED U.S. federal agency (not AID or ARS)

UCOM U.S. commercial company

UIND U.S. individual no affiliation

Shawn Mehlenbacher/Gaurab Bhattarai
Oregon State University, Corvallis, OR 97331

Assignment of high-level eastern filbert blight (EFB) resistance linkage groups (LG). In cooperation with Tom Molnar at Rutgers University, we have identified more than 100 sources of resistance. Over several years, resistant accessions were crossed with susceptible selections, and the resulting seedlings were exposed to EFB under a structure topped with diseased branches. In progenies that segregate 1:1 (resistant: susceptible), resistance was assigned to LG based on correlation with mapped simple sequence repeat (SSR) markers, with the initial focus on regions where resistance was previously mapped (LGs 6, 2, and 7). In August 2022, a summary report was presented at the International Horticultural Congress in Angers, listing 30 sources that had been assigned to LG: 17 on LG6, five on LG2, and eight on LG7. Since then, graduate students have mapped additional EFB resistance sources at OSU hazelnut breeding and genetics lab. PhD student Brianna Heilsnis has mapped three sources (C. americana 'Winkler', OSU 366.060, and interspecific hybrid Bauman OSU 401.014) to LG1 (presented at the 2023 winter meeting of the Nut Growers Society). She developed new markers for the region, applied them to these populations, and was also presented at the 2024 Plant & Animal Genome Conference (PAG). Three sources from Giresun, Turkey, were mapped to LG2, in the same region as Georgian and Holmskij resistance. The results were presented at the 2022 Hazelnut Congress in Corvallis, OR. Resistance from selection 3-07-11, obtained from Rutgers University, was also mapped to LG6. PhD student Rion Mooneyham assigned EFB resistance from five different selections to four different linkage groups: Dickum hybrid OSU 1044.086 to LG4, OSU 1168.098 Sochi Market #4 to LG2, H3R07P07 and OSU 1582.062 (Finland CCOR 187) to LG6, and H3R12P58 to LG7. Graduate students are developing new SSRs and conducting fine mapping: Brianna Heilsnis in the LG2 resistance region and Rion Mooneyham in the LG7 resistance region. Resistance from 12 sources has not yet been assigned to LG, but crosses have been made and seedlings exposed to EFB.

Quantitative EFB resistance. Quantitative resistance is expressed as fewer and smaller cankers, exemplified by 'Sacajawea' and 'Tonda di Giffoni', which serve as check cultivars. Resistance is quantified by exposing a dozen potted trees per selection under a structure topped with diseased branches and then counting and measuring cankers 18 months later. The OSU hazelnut breeding program identified a diverse set of 78 selections with a high level of quantitative resistance. The list includes 17 selections of Turkish origin and 19 from Eastern Europe/Caucasus, all of which are from imported seed lots shared by OSU and Rutgers. Testing is being repeated to better document the resistance. To investigate genetic control of quantitative resistance, selections have been crossed in pairs and the seedlings planted in NJ and MO along with the parents. A multi-species SNP array now under development will allow GWAS analysis and identification of QTL for quantitative EFB resistance. Justin Lombardoni's PhD research at Rutgers University identified three important QTL for quantitative resistance from 'Tonda di Giffoni'.

Hybrid hazelnuts. Selection OSU 541.147 was released, and trees will be sold under the name "The Beast". Its pedigree is 75% European and 25% American, with resistance conferred by a dominant allele on LG7 from *C. americana* 'Rush'. F₁ selections (72) from crosses of the American hazel (*Corylus americana*) and the European hazel (*C. avellana*) have been exposed to EFB under the structure. Of the selections recently tested at OSU, about half have more disease than the check 'Sacajawea', one-third have less disease than 'Sacajawea', and others have no cankers. It appears that the American hazel transmits quantitative as well as major gene

resistance. Selections from the F_1 generation and seedlings of the F_2 generation (from pairwise crosses of unrelated F_1 selections) are being shared with partners at Rutgers Univ., Univ. of Nebraska-Lincoln, and the Univ. of Missouri. Early results from NJ show that most of the F_1 selections express moderate to severe EFB, and interestingly, disease scores at Rutgers on the same clones differ from OSU scores. Segregation in the F_2 followed a distribution curve expected for quantitatively controlled traits; tolerance and resistance were recovered in the offspring. Transgressive segregation was common, with several individual seedlings having less EFB than either parent.

Pollen-stigma incompatibility. Incompatibility in hazelnuts is sporophytic and controlled by a single locus. Each year, we identify the S-alleles of about 60 selections. Tests in 2023 and 2024 included *C. avellana* selections from Rutgers University. The New Jersey selections had been in post-entry quarantine to prevent the introduction of new isolates of EFB. These selections will be used as parents for crossing in the coming Winter to map a new source of resistance to eastern Filbert blight.

Table 1. Incompatibility alleles in selections from Rutgers University.

Selection	Sa	Sb	Year Completed
Rutgers 121.100	8	31	2024
Rutgers 123.014	2	20	2023
Rutgers 126.077	10	33	2023
Rutgers 126.138	10	22	2023
Rutgers 130.179	1	9	2024
Rutgers 130.205	1	12	2023
Rutgers 132.074	4	25	2024
Rutgers 420.088	6	32	2023
Rutgers 421.005	2	6	2023
Rutgers 426.102	4	10	2024
Rutgers 427.028	4	17	2023
Rutgers 502.071	3	4	2024
Rutgers 502.186	12	31	2024
Rutgers 503.011	2	3	2023
Rutgers 504.028	10	20	2023
Rutgers 504.116	4	10	2023
Rutgers 505.032	4	22	2024
Rutgers 506.002	4	4	2023
Rutgers 506.100	10	21	2024
Rutgers 506.095	5	10	2024
Rutgers 513.091	4	20	2024
Rutgers 514.034	4	30	2023
Rutgers 517.048	23	31	2024
Rutgers 518.008	1	9	2024
Rutgers 519.021	2	18	2023

2. Peter Cersovski

Harrisburg, OR 97446

Species requested: Zea mays subsp. mays

The material received was of high quality, with no damage and very good germination. All materials are stiff stalks. The two inbreds will be used for breeding projects. Based on one year of data, GEMS lines are susceptible to leaf disease, except for gems0316. Gems0316 has the toughest stalk of any maize variety grown.

3. Virginia Leahman

Blue Moon Farm LLC, Lebanon, OR 97355

Species requested: Medicago sativa subsp. sativa

The material was in good condition and used as a comparison of standards to new varieties.

4. Hemant Kardile

Oregon State University, Hermiston, OR 97838

Species requested: Solanum chacoense, Solanum tuberosum, Solanum tuberosum subsp. andigenum

Germplasm was received in two forms: *in vitro* (10) and seeds (7), all with excellent quality, and utilized in research. The germplasm ordered was diploid accessions. All the accessions were used for *Sli* gene screening, except PL4 (PL 695419), a haploid inducer, for which pollen was collected and frozen. Germplasm GS420, GS421, US-W4, and PI 225689 were used as controls in KASP genotyping for the *Sli* gene.

5. Hilary Gunn

Oregon State University, Corvallis, OR 97331

Species requested: Triticum aestivum subsp. aestivum

The seeds received were of great quality and successfully germinated in the greenhouse. They were used as genetic controls for studying and developing genetic markers for

various traits. Hilary finds the germplasm request system very convenient and plans to continue using it in her program.

6. Aymeric Goyer

Oregon State University, Corvallis, OR 97331

Species requested: Solanum tuberosum

Tissue-cultured plantlets were in good condition and are being used to assess growth on lunar regolith simulants as part of a NASA-funded project.

7. Nicholas Andrew

Oregon State University, Corvallis, OR 97331

Species requested: Vicia sativa, Vicia sativa subsp. sativa

The seeds were clearly labeled and well organized, with helpful GRIN staff providing additional information and seeds. A citation was found about *Vicia sativa* screening in Syria during the late 1980s, identifying non-shattering pod lines bred into locally adapted lines, some of which are in the GRIN collection. In 2025, some common vetch lines showed a mixture of white and purple flowers, suggesting some crossing during maintenance (e.g., 600819 and 600821). In fall 2024, Nicholas planted seeds received from GRIN in 2023 and grew them in plots. Two lines listed as *Vicia sativa* appear to be *Vicia villosa* (e.g., 289508 and 289510). Nicholas is screening common vetch lines and cultivars from around the world to evaluate them for winter hardiness, high biomass, and good seed production in the maritime PNW. Some of the Syrian non-shattering lines were not cold hardy. Small-scale seed increases have begun for top-performing lines. There is interest in making well-adapted or newly developed cultivars available to local seed producers. He suggested keeping up the great work. Some of the lines in the collection seem to be performing well here, and he is very happy to find the non-shattering lines in the collection.

8. Casey Wilson

Oregon State University, Corvallis, OR 97331

Species requested: Cucurbita moschata, Cucurbita pepo, Cucurbita okeechobeensis subsp. martinezii, Cucurbita x scabridifolia

Seed quality was very good with a high germination rate. The Cucurbita lines were used to further explore the expression of the B genes in novel genetic backgrounds. The B genes were crossed into many of the accessions and observed for chlorophyll depletion in aerial organs, including but not limited to fruit, vines, leaves, and petioles. In some cases, data was collected on increased flesh color intensity. Feedback indicated that more detailed information, including images, origin, and important traits, would be helpful.

9. Lauri Reinhold

USDA-ARS-NCGR, Corvallis, OR 97333

Species requested: Ribes rubrum, Ribes spicatum

The materials were fresh tissue, so the quality was good. The materials were used to extract RNA and test for ToRSV.

Publication:

Reinhold, L., Platt, McK., Peetz, A., Donahue, K., Zasada, I. Assessment of the distribution and Occurrence of Dagger Nematodes and Associated Nematode Transmitted Viruses in the Pacific Northwest Small Fruit Crops. Plant Health Progress 2024 25:4, 363-371

10. Daniel Fager

USDA-ARS Horticulture Crops Research Unit, Corvallis, OR 97331

Species requested: Fragaria spp., Fragaria x ananassa

Leaf tissue was collected from the plants in excellent condition. The tissue was used in research comparing various methods for detecting plant viruses and for creating stock of positive controls for diagnostic testing. It was suggested that the virus positive collection (9000 series) could be tested more often for the viruses they are labeled as having. This would make it easier to use them as positive controls for diagnostic testing.

11. Adam Wagner

Oregon Blueberry Farms and Nursery, Silverton, OR 97381

Species requested: Vaccinium corymbosum, Vaccinium hybr.

The material was of excellent quality. In 2021, it was used to make interspecific crosses, and the material received in 2024 was used to refresh the nursery production foundation stock. Increased funding was suggested.

12. Chad Miebach

Radix Research, Junction City, OR 97448

Species requested: Poa secunda

The material was of average quality and is seeded. It is currently in the field and will be evaluated for a few years.

13. Nik Wiman

Oregon State University, Corvallis, OR 97331

Species requested: *Cydonia oblonga, Chaenomeles speciosa, Chaenomeles x superba, Chaenomeles japonica*

The quince and flowering quince selections were noted as excellent and promising. *Corylus cornuta* and *C. chinensis* seeds were collected but not included in the main list. A niche tree fruit research and demonstration orchard was established at NWREC, where plantings were made to showcase to the public and maintain basic records on phenology, productivity, pests, and disease. Corylus seed is being used in ongoing rootstock trials with *C. avellana* scion and is currently germinating. NCGR was praised as an excellent resource, with a suggestion to allow later-season scion availability for pears.

14. Trent Tate

GO Seed, Salem, OR 97305

Species requested: Lolium perenne

The samples were clean seeds with no contaminants. There was a range in the germination of each of the samples. Most were ok for germination, but there were a few that did not have enough germination to evaluate plants. Each accession was planted to determine what traits it potentially would have as a cover crop, forage, or turfgrass. One of the main criteria that was looked at was the ability of that accession of species to produce seed reliably in the region. Some accessions had more specific objectives for evaluation, such as drought tolerance response after seed harvest or drought response in a turfgrass growth habit. Two *Lolium* samples requested are planned to be evaluated for the root depth and abundance, and then determine if higher root depth and abundance are heritable traits that could be bred and selected for perennial ryegrass.

GO Seed utilized the NPGS for several projects, expressing appreciation for access to this valuable resource. Specifically, they received many Kentucky bluegrass accessions and the listed perennial ryegrass accessions from the Pullman site. They also received samples of other crops, including sunn-hemp, *Medicago* species, camelina, buckwheat, flax, and sesame. Each accession was evaluated for potential traits such as cover crop, forage, or turfgrass.

15. Scott Lucas

Oregon State University, North Willamette Research and Extension Station, Aurora, OR 97002

Species requested: Actinidia kolomikta, Actinidia hybr., Actinidia arguta var. arguta, Actinidia arguta, Actinidia callosa, Actinidia macrosperma, Actinidia polygama

The material was of fair quality, having been slated for disposal by the Corvallis NCGR. Most plants were brought to a healthy state after transplanting into uniform media and pots, along with a scheduled fertigation and irrigation program. The plant material will be planted in summer 2025 at the OSU NWREC in buffer rows for demonstration purposes.

16. Jay Kalous

Crosby Hops, Woodburn, OR 97071

Species requested: Humulus lupulus var. lupuloides, Humulus lupulus var. lupulus, Humulus lupulus var. neomexicanus

The materials were in acceptable condition both times, though a significant two-spotted spider mite infestation affected the success of the cuttings. Despite this, successful softwood cuttings were generally achieved. The materials arrived somewhat late in the season for the setup, with early spring being the ideal time for receipt. All the material was used for crossings to enhance diversity within the breeding program. The program is still young, and these materials are only beginning to appear in crosses under testing, with releases into the market expected in the future.

17. John Kobliska

M&J Acres, Monroe, OR 97456

Species requested: Ficus carica, Ficus hybr.

The plant material received was in good condition, and the grafts/starts were successful. None of the material was distributed; instead, it was planted in a test field a month ago to be trialed for fruit production in Oregon and for summer drought resistance once established. If any plants perform well with limited water, they will be crossed with a hardy wild early caprifig from Northern California. A suggestion was made to include links to related research on specific varieties, such as ripening times, yields, and water needs, in the NPGS system to aid in selecting varieties for trial.

18. Hannah Rivedal

USDA-ARS Forage Seed and Cereal Research Unit, Corvallis, OR 97331

Species requested: *Mentha spicata, Mentha canadensis, Mentha suaveolens subsp.* suaveolens, Mentha hybr., Mentha x piperita, Mentha x villosa nothovar. alopecuroides, Mentha x gracilis, Mentha x villosa, Mentha aquatica, Mentha longifolia

High-quality grass seeds were received in 2021, and mints in 2024. In all cases, the quality of the product was very high - pots or seed packets were well-labeled and in good condition, entirely usable for research. The grass seed was intended for inoculation trials after seed bulking but was not used due to space constraints, though it would have been easy to use. The mint collection was sampled weekly during the growing season for rust development to build a rust isolate collection, and some varieties were propagated for reinoculation and severity tests. NPGS was valued as an indispensable resource for agricultural science in the United States, very helpful arm of the ARS mission and finds that the system generally effective.

19. Melinda Guzman

Agromillora Quality Assurance Lab, McMinnville, OR 97128

Species requested: Rubus occidentalis

The material was of good quality and, although collected during winter with few *Rubus* leaves, it was still usable. DNA was successfully extracted and added to the laboratory's reference list. The work was conducted at a phytosanitary and genetic analysis laboratory in McMinnville, OR, where reference material is used to compare against growers' samples to verify variety. They are seeking *Rubus*, *Vaccinium*, and *Humulus* materials in stock at the Corvallis NCGR for DNA extraction and suggest a system to notify staff that the materials are intended solely for DNA extraction and not for release or cultivation.

20. Yedilaklil Hunde

Barenbrug, Albany, OR 97322

Species requested: Eragrostis curvula

Some materials received included segregating populations, requiring selection for advancement in ongoing projects. Quality has room for improvement, but it's also totally understandable. All materials ordered from the NPGS system are intended for use in breeding programs, particularly for non-apomictic types. Initial steps involve increasing the material while evaluating its suitability. Material found unsuitable is discontinued, whereas those with desirable traits are considered for crossing to develop new varieties. The team generally does not prioritize publishing unless pursuing variety registration, at which point due credit will be given.

Suggestions include a desire for more user-friendly and accessible data on collections, as selection often depends on available file information. Enhanced data curation, potentially supported by AI tools, could significantly improve utility. Overall, they are satisfied with the germplasm and service from the NPGS system, which is vital for expanding the genetic diversity of their breeding programs.

21. Dave Selden

Springdale Press, Corbett, OR 97019

Species requested: Pyrus communis, Pyrus ussuriensis

Dave grafted pears' scion wood for distribution to perry-making colleagues and for personal perry-making. No issues were recalled with the process. The trees are still too small to harvest scionwood from. Dave expressed a desire for continued access to scionwood, noting it was a valuable resource, particularly for hard-to-find perry varieties.

22. Alex Baasch

Peak Plant Genetics, LLC, Albany, OR 97321

Species requested: Poa pratensis, Eragrostis tef, Festuca rubra subsp. commutate, Festuca arundinacea, Lolium perenne, Poa trivialis, Festuca rubra subsp. rubra, Agrostis capillaris, Agrostis stolonifera, Festuca rubra subsp. densiuscula, Festuca rubra subsp. commutata, Festuca lemanii, Agrostis castellana, Festuca trachyphylla, Agrostis canina, Festuca rubra, Sambucus nigra, Sambucus canadensis, Sambucus nigra subsp. nigra, Festuca longifolia

The quality of material from the W6 site is declining as seed ages, affecting the usability of standard grass checks required annually for Plant Variety Protection (PVP) trials. Certain standards, including Bonanza and Rebel II Tall fescue; Manhattan II, Linn, and Pinnacle Perennial Ryegrass, now have very low germination and seedling vigor, making them unsuitable. These standards are critical for comparing experimental varieties and demonstrating relative maturity, which is essential for Exhibit C of the PVP application. Kentucky Bluegrass varieties 'Bewitched' and 'Bedazzled' were received for breeder seed reproduction on behalf of collaborators, with the goal of restoring them to market due to prior issues with varietal integrity. Other *Poa pratensis* lines are being screened for apomixis to identify sexual mother plants for breeding. Crosses have been made from Teffgrass lines sourced from GRIN, and work is beginning with GRIN-sourced Timothy and Ladino-type White Clover. Peak Plant Genetics releases 10-40 varieties per year. They submitted 37 varieties in the last cycle of the Tall Fescue planting in the National Turfgrass Evaluation Program (NTEP).

There were communication challenges within NPGS, notably with outdated request procedures and delays in responses. Assistance from NPGS staff was very helpful and critical in correcting the order process and preventing a one-year delay in varietal registration. Maintaining viable seed lots of required standards is essential, as current stocks are aging and limited, impacting the success of PVP trials.

23. Kirsten Zulyevic

Handverk Farms/ Apothebox, Junction City, OR 97448

Species requested: Sambucus nigra, Sambucus nigra subsp. nigra, Sambucus canadensis

The cuttings received varied in size due to the overall health of the source plants. While some were viable and healthy, many cuttings with a diameter the size of a pencil or smaller were not viable and did not survive. The propagations are used in field tests to identify plants suitable for commercial farming and landscape design. Ordered materials are currently in field trials. Kirsten greatly appreciates NPGS and mentioned that the system is easy to use. Kirsten said it allows them to trial not only cultivars but also potential new crops that integrate well with existing farming operations. The curator was easy to work with, knowledgeable, and responsive. Kirsten appreciated the site's dedication to providing quality plant materials and accessibility, hoping for its continued availability and growth. He noted that the Willamette Valley is an excellent location for farming, and NPGS provides valuable opportunities to explore new agricultural options.

24. Ryan Graebner

Oregon State University, Columbia Basin Agricultural Research Center, Adams, OR 97810

Species requested: Carthamus tinctorius, Triticum aestivum subsp. aestivum

Each of these experimental lines ordered was tested in small plots at the Columbia Basin Agricultural Research Center near Adams, Oregon. Several spring wheat breeding lines resulting from a cross from Edison are actively being tested.

25. Savannah Phipps

USDA Horticultural Crops Research Unit, Corvallis, OR 97330

Species requested: Rubus idaeus subsp. idaeus

The materials were personally collected after she was notified that the plants were ready. Cuttings were taken to perform an aphid biotype test. No propagation occurred, and the cuttings were disposed of after the test.

26. Simon Lee Beaverton, OR 97005

Species requested: Humulus lupulus var. lupulus

Simon mentioned that he requested hops in the usable form of cuttings, but seeds were instead sent from completely unrelated lineages. Hop seeds are generations away from shareable germplasm and are most often not considered worthwhile. The seeds were started at home, but most did not survive. Simon suggested making the process more transparent regarding who receives what and why.

27. Pam Milliren

DTTR, Willamina, OR 97396

Species requested: Pyrus communis, Cydonia oblonga, Mespilus germanica

The quality of materials was excellent, and Pam was pleased with what she received. The pears were grafted onto appropriate rootstocks, OHxF, and the quince onto Quince A. In 2024, a heatwave occurred in the Oregon Coast Range, reaching 112°F. As a result, all the trees blistered, leading to the loss of around 100 apples, pears, and quince trees that were 1–5 years old. Pam shared her experience on Facebook. Pam expressed gratitude for GRIN's existence.

28. Ryan Contreras

Oregon State University, Corvallis, OR 97331

Species requested: Rubus hybr., Rubus trivialis, Rubus idaeus subsp. idaeus, Rubus occidentalis, Rubus argutus, Rubus ursinus, Rubus rugosus, Rubus ulmifolius, Rubus flagellaris, Rubus corylifolius, Maclura pomifera

All the materials were of good quality. All Rubus selections were leaf samples used for DNA content and ploidy analysis to support germplasm characterization, especially in support of the USDA caneberry breeding program. The *Maclura* accessions were received as seeds. Unfortunately, they have not been sown due to miscommunication and staff departures. They will be sown during May 2025 for evaluation and planting examples on campus for teaching and collection enrichment.

29. Derek Scholin

CropCircle, Portland, OR 97219

Species requested: Oryza sativa

The seeds received had a varied germination rate, but lines of each variety received were successfully established. Seeds were germinated in vitro to establish cell culture lines. No material has been released to the public yet, but there is a plan to provide dry cell samples to prospective clients by the end of the year. The website was found to be a bit confusing when requesting seed, and a page with clear instructions would be helpful.

30. Bryan Baugnon Eugene, OR 97404

Species requested: Ficus carica

At the end of 2021, Bryan received excellent cuttings from the USDA and used them in ongoing trials of figs that mature reliably in the Pacific Northwest. At that time, nearly a hundred different figs from many different sources were being grown. Currently, around 40 figs are still growing. Of the USDA figs, only four cultivars remain, as the others were culled out for various reasons. Bryan sees the NPGS system as an important way to interact with growers in the field, expressing gratitude for being included in the program.

31. Lorraine Gardner and Jim Gilbert Northwoods Nursery, Inc., Molalla, OR 97038

Species requested: Pyrus communis, Prunus cerasus, Punica granatum, Prunus persica, Prunus persica var. nucipersica, Prunus mahaleb, Actinidia arguta, Prunus salicina, Prunus davidiana, Prunus armeniaca, Prunus spp.

The quality of the accessions was mostly very good, except for Liubskaia Clone 17/39. They are primarily being used for breeding and variety trials. For *Prunus* and *Pyrus*, accessions under variety trial are being evaluated for disease resistance, fruit production, and quality when grown in the maritime Pacific Northwest climate. These have been established in the field, and evaluation continues as of June 2025. Accessions used for breeding are being evaluated for breeding traits, with several selections used as pollen parents in 2025 crosses. For *Actinidia arguta*, the accessions will be included in a new

kiwi mother block/variety trial to be established in the field in 2025. Plants were also provided to Scott Lukas at the OSU North Willamette Experiment Station for inclusion in a variety trial there. For *Prunus*, some accessions are being evaluated for disease resistance, fruit production, and quality when grown in the maritime Pacific Northwest climate, to identify varieties suitable for home gardeners. These have been established in the field, and evaluation continues as of June 2025, except for a few that died or have been removed due to high susceptibility to diseases.

Northwoods Nursery expressed appreciation for the NPGS system, emphasizing the value of its work to their efforts and the success of their business. They thanked the team for their important role in protecting, characterizing, and distributing valuable germplasm.

One logistical recommendation offered concerns the timing of the distribution of propagation material. While noted as a minor issue, they suggested that receiving material when the plant is easier to propagate on the receiving end would likely result in improved establishment success.

32. Leah Duda

E&R Farm Partnership, Gervais, OR 97026

Species requested: *Rheum x rhabarbarum*

The root cuttings received were of high quality. They were being assessed to determine which variety would perform well in the local area for further propagation.