1. List your research and extension projects under the official NCCC 212 objectives, emphasizing collaborative projects with other researchers. A suggested format is below.

Objective 1 - Develop improved small fruit germplasm through cooperative breeding and evaluation programs:

Blackberry and Raspberry:

Continuing to evaluate performance of blackberry and raspberry selections until vice-Finn position is filled. C. Finn, USDA-ARS-HCRU, Corvallis OR; B. Strik, Oregon State University, Corvallis OR; M. Hardigan, USDA-ARS-HCRU, Corvallis OR; P. Moore, Washington State University, Puyallup WA; M. Dossett, Agri-Food Research Centre, Agriculture and Agri-Food Canada, Agassiz, BC Canada; N. Bassil, USDA-ARS-NCGR, Corvallis OR; M. Peterson, USDA-ARS, Corvallis OR; R. Martin, USDA-ARS-HCRU, Corvallis OR; J. Lee, USDA-ARS-HCRU, Parma ID.

'Twilight' (ORUS 4370-1; USPP 30,879) semi-erect blackberry released and patented 2019. C. Finn, USDA-ARS-HCRU, Corvallis OR; B. Strik, Oregon State University, Corvallis OR; B. Yorgey, OSU, Corvallis OR; M. Peterson, USDA-ARS, Corvallis OR; P. Jones, OSU, Aurora, OR; J. Lee, USDA-ARS-HCRU, Parma ID; N. Bassil, USDA-ARS-NCGR, Corvallis OR; R. Martin, USDA-ARS-HCRU, Corvallis OR.

Blueberry & Huckleberry:

Continuing to evaluate performance of blueberry selections until vice-Finn position is filled. C. Finn, USDA-ARS-HCRU, Corvallis OR; B. Strik, Oregon State University, Corvallis OR; M. Hardigan, USDA-ARS-HCRU, Corvallis OR; N. Bassil, USDA-ARS-NCGR, Corvallis OR; T. Mackey, USDA-ARS, Corvallis OR; R. Martin, USDA-ARS-HCRU, Corvallis OR; J. Lee, USDA-ARS-HCRU, Parma ID.

Objective 2 - Develop practices for small fruit production tailored for climatic and market needs of growers.
n.a.

How have the results been disseminated to communities of interest?
What do you plan to do during the next reporting period to accomplish the goals?

3. Include any data, germplasm/cultivar descriptions, research results, etc. that you would like to discuss at the meeting. Please keep this brief, highlighting no more than three discussion points within 500 words. Additional information (data tables, abstracts, etc…) can be included in an appendix.

n.a.

4. List retrievable or archived publications arising from your collaborative research projects including journal articles, book chapters, review articles, theses, proceedings, and extension publications. Please use ASHS style.

Bradish, C.M., J.M. Bushakra, L. Robbins, E. Karaaoac, S. Teo, J.L. Willard, P. Perkins-Veazie, J. Lee, J. Scheerens, C. Weber, M. Dossett, N.V. Bassil, C.E. Finn, G. Fernandez, G. 2020. Standardized phenotyping in black raspberry. J. Amer. Pomol. Soc. 74:2-17.

Bushakra, J.M., L.A. Alice, K.A. Carter, M. Dossett, J.C. Lee, A. Liston, R. Meiers, C. Mulch, A.M. Nyberg, J.R. Clark, C.E. Finn, N.V. Bassil, and K.E. Hummer. 2020. Status of *Rubus* germplasm at the US National Clonal Germplasm Repository in Corvallis, Oregon. Acta Hort. 1277:121-128.

Carter, K., J.D. Zurn., N.V. Bassil, C.E. Finn, and K.E. Hummer. 2019. The importance of being 'Boysen': examining genotypic variation with simple sequence repeat markers. J. Amer. Pomol. Soc. 73:47-52.

Castillejo, C., V. Waurich, H. Wagner, R. Ramos, N. Oiza, P. Muñoz, J.C. Triviño, J. Caruana, Z. Liu, N. Cobo, M.A. Hardigan, S. Knapp, J.G. Vallarino, S. Osorio, C. Martín-Pizarro, D. Pose, T. Toivainen, T. Hytonen, Y. Oh, C.R. Barbey, V.M. Whitaker, S. Lee, K. Olbricht, J.F. Sánchez-Sevilla, and I. Amaya. 2020. Allelic Variation of MYB10 is the Major Force Controlling Natural Variation of Skin and Flesh Color in Strawberry (Fragaria spp.) fruit. Plant Cell tpc.00474.2020. doi:10.1105/tpc.20.00474.

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Mulch, C., N.V. Bassil, C.E. Finn, M. Dossett, and K.J. Vining. Development of a robust RNA extraction protocol for black raspberry. Acta Hort. 1277:113-120.

Farneti, B., F. Emanuelli, L. Giongo, P. Toivonen, M. Iorizzo, K. Folta, and C. Finn. Editorial: interdisciplinary approaches to improve quality of soft fruit berries. Frontiers Plant Sci. 11: article number 592222.

Feldmann, M.J., M.A. Hardigan, R.A. Famula, C.M. López, A. Tabb, G.S. Cole, and S.J. Knapp. 2020. Multi-dimensional machine learning approaches for fruit shape phenotyping in strawberry. Gigascience 9. doi:10.1093/gigascience/giaa030.

Finn, C.E. 2019. United States Plant Patent Number 30,062. Blackberry plant named 'Galaxy'.

Finn, C.E. 2019.United States Plant Patent Number 30,063. Blackberry plant named 'Hall's Beauty'.

Finn, C.E. 2019. United States Plant Patent Number 30,448. Blackberry plant named 'Eclipse'.

Finn, C.E. 2019. United States Plant Patent Number 30,879. Blackberry plant named 'Twilight'.

Finn, C.E., B.C. Strik, T.A. Mackey, P.A. Jones, N.V. Bassil, and R.R. Martin. 2019. 'Echo' ornamental reflowering blueberry. HortScience 54:368-370.

Finn, C.E., B.C. Strik, B.M. Yorgey, M.E. Peterson, P.A. Jones, J. Lee, N.V. Bassil, and R.R. Martin. 2019. 'Hall's Beauty' thornless trailing blackberry. HortScience 54:371-376.

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Hardigan, M.A., M.J. Feldmann, A. Lorant, K.A. Bird, R. Famula, C. Acharya, G. Cole, P.P. Edger, and S.J. Knapp. 2020. Genome synteny has been conserved among the octoploid progenitors of cultivated strawberry over millions of years of evolution. Front. Plant Sci. 10:1789. doi:doi.org/10.3389/fpls.2019.01789.

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Willman, M., J.M. Bushakra, N.V. Bassil, C.E. Finn, M. Dossett, P. Perkins-Veazie, C.M. Bradish, G.E. Fernandez, C.A. Weber, J. Scheerens, L. Dunlap, J. Fresnedo-Ramírez. 2020. Genetic analysis of drupelet count in black raspberry (*Rubus occidentalis*). Acta Hort. 1277:65-72.

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Zurn, J., M. Driskill, S. Jung, D. Main, M.H. Yin, M.C. Clark, L. Cheng, H. Ashrafi, E. Aryal, J.R. Clark, M. Worthington, C.E. Finn, C. Peace, A.F. Iezzoni, and N. Bassil. 2020. A Rosaceae family-level approach to identify loci influencing soluble solids content in blackberry for DNA-informed breeding. G3-Genes Genomic Genetics. In press. DOI: 10.1534/g3.120.401449.

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