

## Arron H. Carter

Associate Professor and O.A. Vogel Endowed  
Chair of Wheat Breeding and Genetics

Department of Crop and Soil Sciences, P.O. Box 646420  
Washington State University, Pullman, WA 99164-6420

Phone: (509) 335-6198, Fax: (509) 335-8674, E-mail: ahcarter@wsu.edu

PEER REVIEWED PUBLICATIONS (Underline=WSU mentored Graduate Student or Post-Doctoral Researcher; Italics=Undergraduate Research Student)

Footnotes: 1. Developed the initial idea  
2. Obtained or provided funds/resources  
3. Collected data  
4. Analyzed data  
5. Wrote/created product  
6. Edited product

1. Sandhu KS, Mihalyov PD, Lewien MJ, Pumphrey MO, **Carter AH** (2020) Combining genomic and phenomic information for predicting grain protein content and grain yield in spring wheat. *Frontiers in Plant Science* **Submitted (1,2,3,4,5,6)**
2. Dixon LS, Bellinger B, **Carter AH** (2020) A gravimetric method to monitor plant transpiration under water stress conditions. *Plos ONE* **Submitted (1,2,3,4,5,6)**
3. Horgan A, Garland-Campbell KA, **Carter AH**, Steber CM (2020) Genotypic effects on seedling elongation responses to GA seed treatments in wheat (*Triticum aestivum* L.). *Agrosystems, Geosciences, and Environment* **In revision (1,2,3,4,5,6)**
4. Lozada DN, **Carter AH**, Mason RE (2020) Unlocking yield potential of wheat: influence of major growth habit and adaptation genes. *Crop Breeding, Genetics and Genomics* **In Revision (1,2,3,4,5,6)**
5. Sandhu KS, Lozada DN, Zhang Z, Pumphrey MO, Carter AH (2020) Deep learning for predicting complex traits in spring wheat. *Frontiers in Plant Science* **Early View** doi:10.3389/fpls.2020.613325
6. Merrick LF, Lyon SR, Balow KA, Murphy KM, Jones SS, **Carter AH** (2020) Evolutionary plant breeding in a conventional winter wheat breeding program. *Sustainability* 12:9728. Doi:10.3390/su12229728 **(2,3,4,6)**
7. Sjoberg SM, **Carter AH**, Steber C, Garland-Campbell KA (2020) Application of the factor analytic model to assess wheat falling number performance and stability in multi-environment trials. *Crop Science* **Early View** doi:10.1002/csc2.20293 **(2,6)**
8. Sjoberg SM, **Carter AH**, Steber CM, Garland-Campbell KA (2020) Unravelling complex traits in wheat: approaches for analyzing genotype by environment interactions in a multi-environment study of falling numbers. *Crop Science* 60:3013-3026 doi:10.1002/csc2.20133 **(1,2,3,4,5,6)**
9. Kruse EB, Revolinski S, Aplin J, Skinner DZ, Murray TD, Edwards C, **Carter AH** (2020) Gene Expression and Carbohydrate Accumulation in Winter Wheat Lines with Different Levels of Snow Mold and Freezing Cold Tolerance. *Plants* 9:1416 doi:10.3390/plants9111416 **(1,2,3,4,5,6)**

10. **Carter AH**, Allan RE, Shelton G, Burke A, Balow K, Hagemeyer K, Chen XM, Engle D, Garland-Campbell KA, Morris C, Murray T, Paulitz T, Clare SJ, Klarquist EF (2020) How ‘Madsen’ has shaped Pacific Northwest wheat and beyond. *Journal of Plant Registrations* 14:223-233 doi:10.1002/plr2.20049 **Selected featured article in the September 2020 CSA News (1,2,3,4,5,6)**
11. **Carter AH**, Rath BB, Gorzkowski EP, Qadri SB (2020) Evaluation of Silica content in winter wheat chaff. *Agriculture and Environmental Letters* 5:e20025 doi:10.1002/ael2.20025 **(1,2,3,4,5,6)**
12. Lozada DN, Ward BP, **Carter AH** (2020) Gains through selection for grain yield in a winter wheat breeding program. *PLoS ONE* 15(4):e0221603 doi:10.1370/journal.pone.0221603 **(1,2,3,4,5,6)**
13. Lozada DN, **Carter AH** (2020) Genomic selection in winter wheat breeding using a recommender approach. *Genes* 11:779 doi:10.3390/genes11070779 **(1,2,3,4,5,6)**
14. Lozada DN and **Carter AH** (2020) Insights into the genetic architecture of phenotypic stability traits in winter wheat. *Agronomy* 10:368 doi:10.3390/agronomy10030368 **(1,2,3,4,5,6)**
15. Nazarov T, Chen X, **Carter A**, See D. (2020) Fine mapping of high-temperature adult-plant resistance to stripe rust in wheat cultivar Louise. *Journal of Plant Protection Research* 60:126-133 doi:10.24425/jppr.2020.132213 **(2,3,6)**
16. Faris F, Overlander ME, Kariyawasam GK, **Carter AH**, Xu SS, Liu Z (2020) Identification of a major dominant gene for race-nonspecific tan spot resistance in wild emmer wheat. *Theoretical and Applied Genetics* 133:829-841 **(1,2,3,4,5,6)**
17. Lozada DN, Godoy JV, Ward BP, **Carter AH** (2019) Genomic prediction and indirect selection for grain yield in US Pacific Northwest winter wheat using spectral reflectance indices from high-throughput phenotyping. *International Journal of Molecular Science* 21:165 doi.org/10.3390/ijms21010165 **(1,2,3,4,5,6)**
18. Kruse EB, Klos K, Marshall J, Murray TD, Ward BP, **Carter AH** (2019) Evaluating marker assisted selection in breeding for tolerance to snow mold in winter wheat. *Agrosystems, Geosciences, and Environment* 2:190059 doi:10.2134/age2019.07.0059 **(1,2,3,4,5,6)**
19. Lozada DN, Godoy JV, Murray TD, Ward BP, **Carter AH** (2019) Genetic dissection of snow mold tolerance in US Pacific Northwest winter wheat through genome-wide association study and genomic selection. *Frontiers in Plant Science* 29 October 2019 doi.org/10.3389/fpls.2019.01337 **(1,2,3,4,5,6)**
20. Dixon LS, Godoy JV, **Carter AH** (2019) Evaluating the utility of carbon isotope discrimination as a selection criterion for wheat cultivar development. *Plant Phenomics* Volume 2019, Article ID 4528719 doi.org/10.34133/2019/4528719 **(1,2,3,4,5,6)**
21. Nielsen N, Stubbs TL, Garland-Campbell K, and **Carter AH** (2019) Rapid estimation of wheat straw decomposition constituents using near-infrared spectroscopy. *Agronomy* 9(8):462 doi.org/10.3390/agronomy9080462 **(1,2,3,4,5,6)**
22. Dixon LS and **Carter AH** (2019) Toward a new use for carbon isotope discrimination in wheat breeding. *Agronomy* 9(7), 385 doi:10.3390/agronomy9070385 **(1,2,3,4,5,6)**
23. Fitria, Ruan H, Fransen SC, **Carter AH**, Tao H, Yan B (2019) Selecting winter wheat straw for cellulosic ethanol production in Pacific Northwest, USA. *Biomass and Bioenergy* 123:59-69 **(1,2,3,4,5,6)**

24. Gizaw SA, Godoy J, Garland-Campbell K, **Carter AH** (2018) Genome-wide association study of yield and component traits in Pacific Northwest winter wheat (*Triticum aestivum* L.). *Crop Science* 58:2315-2330 (1,2,3,4,5,6)
25. Gizaw SA, Godoy JG, Pumphrey MO, **Carter AH** (2018) Spectral reflectance for indirect selection and genome-wide association analyses of grain yield and drought tolerance in North American spring wheat (*Triticum aestivum* L.). *Crop Science* 58:1-13 doi:10.2135/cropsci.2017.11.0690 (1,2,3,4,5,6)
26. Godoy J, Gizaw S, Chao S, Blake N, **Carter A**, Cuthbert R, Dubcovsky J, Hucl P, Kephart K, Pozniak C, Prasad PVV, Pumphrey M, Talbert L (2018) Genome-wide association study (GWAS) of agronomic traits in a spring planted North American elite hard red spring wheat panel. *Crop Science* 58:1838-1852 (1,2,3,4,5,6)
27. Zhang J, Gizaw SA, Bossolini E, Hegarty JM, **Carter AH**, Chao S, Akhunov E, Dubcovsky J (2018) Identification and validation of QTL for grain yield and plant water status under contrasting water treatments in fall-sown spring wheat. *Theoretical and Applied Genetics* 131:1741-1759 (1,2,3,4,5,6)
28. Lewien MJ, Murray TD, Jernigan KL, Garland-Campbell KA, **Carter AH** (2018) Genome-wide association mapping for eyespot disease in US Pacific Northwest winter wheat. *PLoS ONE* April 2, 2018 <https://doi.org/10.1371/journal.pone.0194698> (1,2,3,4,5,6)
29. Gizaw SA, Godoy JGV, Garland-Campbell K, **Carter AH** (2018) Using spectral reflectance as proxy phenotypes for genome-wide association studies of yield and yield stability in Pacific Northwest winter wheat. *Crop Science* 58:1232-1241 **Selected featured article in the May 2018 CSA News** (1,2,3,4,5,6)
30. Jernigan KL, Godoy J, Huang M, Zhou Y, Morris CF, Garland-Campbell KA, Zhang Z, **Carter AH** (2018) Association mapping for end-use quality in Pacific Northwest adapted soft white winter wheat. *Frontiers in Plant Science* 09 March 2018 <https://doi.org/10.3389/fpls.2018.00271> (1,2,3,4,5,6)
31. Martinez SA, Godoy J, Huang M, Zhang Z, **Carter AH**, Garland-Campbell K, Steber CM (2018) Genome-wide association mapping for tolerance to preharvest sprouting and low falling numbers in wheat. *Frontiers in Plant Science* 14 February 2018 <https://doi.org/10.3389/fpls.2018.00141> (1,2,3,4,5,6)
32. Liu W, Naruoka Y, Miller K, Garland-Campbell K, **Carter AH** (2018) Characterizing and validating stripe rust resistance loci in US Pacific Northwest winter wheat accessions (*Triticum aestivum* L.) by genome-wide association and linkage mapping. *Plant Genome* 11:170087. doi:10.3835/plantgenome2017.10.0087 (1,2,3,4,5,6)
33. Aramrak A, Lawrence NC, DeMacon VL, **Carter AH**, Kidwell KK, Burke IC, Steber CM (2018) Isolation of mutations conferring increased glyphosate resistance in spring wheat, *Triticum aestivum* (L.). *Crop Science* 58:84-97 (1,2,3,4,5,6)
34. Jernigan KL, Morris CF, Zemetra R, Chen J, Garland-Campbell K, **Carter AH** (2017) Genetic analysis of soft white wheat end-use quality traits in a club by common wheat cross. *Journal of Cereal Science* 76:148-156 <https://doi.org/10.1016/j.jcs.2017.06.005>
35. Kruse EB, Carle SW, Wen N, Skinner DZ, Murray TD, Garland-Campbell KA, **Carter AH** (2017) Genomic regions associated with tolerance to freezing stress and snow mold in winter wheat. *Genes|Genomes|Genetics:G3* 7:775-780 (1,2,3,4,5,6)
36. Gizaw S, Garland-Campbell K, and **Carter AH** (2016) Use of spectral reflectance for indirect selection of yield potential and stability in Pacific Northwest winter wheat. *Field Crops Research* 196:199-206 (1,2,3,4,5,6)

37. Gizaw S, Garland-Campbell K, and **Carter AH** (2016) Evaluation of agronomic traits and spectral reflectance in Pacific Northwest winter wheat under rain-fed and irrigated conditions. *Field Crops Research* 196:168-179 (1,2,3,4,5,6)
38. Froese PS and **Carter AH** (2016) Single nucleotide polymorphisms in the wheat genome associated with tolerance of acidic soils and aluminum toxicity. *Crop Science* 56:1662-1677 (1,2,3,4,5,6)
39. Froese PS, Murray TD, and **Carter AH** (2016) Quantitative Cephalosporium stripe disease resistance mapped in the wheat genome. *Crop Science*: 56:1586-1601 (1,2,3,4,5,6)
40. Kariyawasam G, **Carter AH**, Rasmussen J, Faris J, Xu S, Mergoum M, Liu Z (2016) Genetic relationships between race-nonspecific and race-specific interactions in the wheat-Pyrenophora tritici-repentis pathosystem. *Theoretical and Applied Genetics* 129:897-908 (1,2,3,4,5,6)
41. Carter BP, Galloway MB, Campbell GS, **Carter AH** (2016) Changes in the moisture permeability of grain at the critical water activity from dynamic dewpoint isotherms. *American Society of Agricultural and Biological Engineers* 59:1023-1028 (1,2,3,4,5,6)
42. Klarquist E, Chen XM, **Carter AH** (2016) Novel QTL for stripe rust (*Puccinia striiformis* f. sp. *tritici*) resistance on chromosomes 4A and 6B from soft white winter wheat (*Triticum aestivum*). *Agronomy* 6:4 (1,2,3,4,5,6)
43. Kuhn J, Stubbs T, **Carter AH** (2016) Effect of the Gpc-B1 allele in hard red winter wheat (*Triticum aestivum* L.) in the Pacific Northwest of the US. *Crop Science* 56:1009-1017 (1,2,3,4,5,6)
44. Khot LR, Sankaran S, **Carter AH**, Johnson DA, Cummings TF (2016) UAS imaging-based decision tools for arid winter wheat and irrigated potato production management. *International Journal of Remote Sensing*, 37:125-137 (1,2,3,4,5,6)
45. Matute MM, **Carter AH**, Sherman J (2015) Nematode composition and soil conditions in plots under a wheat crop in Colfax, Washington State. *Journal of Agricultural Science* 7:76-89 (1,2,3,4,5,6)
46. Sankaran S, Khot LR, **Carter AH** (2015) Field-based crop phenotyping: Multispectral aerial imaging for rapid evaluation of winter wheat emergence and spring stand. *Computers and Electronics in Agriculture* 118:372-379 (1,2,3,4,5,6)
47. Carter BP, Galloway MB, Campbell GS, **Carter AH** (2015) The critical water activity from dynamic dewpoint isotherms as an indicator of pre-mix powder stability. *Journal of Food Measurement and Characterization* 9:479-486 (1,2,3,4,5,6)
48. Carter BP, Galloway MB, Campbell GS, **Carter AH** (2015) The critical water activity from dynamic dewpoint isotherms as an indicator of crispness in low moisture cookies. *Journal of Food Measurement and Characterization* 9:463-470 (1,2,3,4,5,6)
49. Carter BP, Galloway MB, Morris CF, Weaver GL, **Carter AH** (2015) The case for water activity as a specification for wheat tempering and flour production. *Cereal Food World* 60:166-170 (1,2,3,4,5,6)
50. Sankaran S, Khot LR, Espinoza CZ, Jarolmasjed S, Sathuvalli VR, Vandemark GJ, Miklas PN, **Carter AH**, Pumphrey MO, Knowles NR, Pavek MJ (2015) Low-altitude, high-resolution aerial imaging systems for row and field crop phenotyping: A review. *European Journal of Agronomy* 70:112-123 (1,2,3,4,5,6)
51. Naruoka Y, Garland-Campbell KA, and **Carter AH** (2015) Genome-wide association mapping for stripe rust (*Puccinia striiformis* f. sp. *tritici*) in US Pacific Northwest winter

- wheat (*Triticum aestivum* L.). Theoretical and Applied Genetics 128:1083-1101 (1,2,3,4,5,6)
52. Squires CC and **Carter AH** (2014) A less lethal sodium hydroxide test for determining seed coat color in wheat. *Seed Science and Technology* 42:274-278 (1,2,3,4,5,6)
  53. Squires CC, See DR, and **Carter AH** (2014) Sources of seed coat color variation in certified wheat seed. *Seed Science and Technology* 42:247-259 (1,2,3,4,5,6)
  54. Higginbotham R, Froese P, **Carter AH** (2014) Tolerance of wheat (*Triticum aestivum* L.) seedlings to wireworm (Coleoptera: Elateridae). *Journal of Economic Entomology* 107:833-837 (1,2,3,4,5,6)
  55. Case AJ, Skinner DZ, Garland-Campbell KA, **Carter AH** (2014) Freezing tolerance-associated QTL in the Brundage x Coda wheat recombinant inbred line population. *Crop Science* 54:982-992 (1,2,5,6)
  56. **Carter, AH**, Cambron SE, Ohm HW, Bosque-Pérez N, Kidwell KK. (2014) Identifying molecular markers associated with Hessian fly (*Mayetiola destructor* [Say]) resistance in the spring wheat (*Triticum aestivum*) cultivar 'Louise'. *Crop Science* 54:1-11 (1,2,3,4,5,6)
  57. Case AJ, Naruoka Y, Chen X, Garland-Campbell KA, Zemetra RS, **Carter AH** (2014) Mapping stripe rust resistance genes in a BrundageXCoda winter wheat population. *PlosONE* 9(3):e91758 doi: 10.1371/journal.pone.0091758 (1,2,5,6)
  58. Higginbotham R, Jones SS, **Carter AH** (2013) Wheat cultivar performance and stability between no-till and conventional tillage systems in the Pacific Northwest of the United States. *Sustainability* 5:882-895 (2,3,4,6)
  59. Cavanagh CR, Chao S, Wang S, Huang BE, Stephen S, Kiani S, Forrest K, Saintenac C, Brown-Guedira GL, Akhunov A, See D, Bai G, Pumphrey M, Tomar L, Wong D, Kong S, Reynolds M, Lopez da Silva M, Bockelman H, Talbert L, Anderson JA, Dreisigacker S, Baenziger PS, **Carter A**, Korzum V, Morrell PL, Dubcovsky J, Morell MK, Sorrells ME, Hayden M, Akhunov E (2013) Genome-wide comparative diversity uncovers multiple targets of selection for improvement in hexaploid wheat landraces and cultivars. *Proc Natl Acad Sci* 100:8057-8062 doi:10.1073/pnas.1217133110 (2,3,4,6)
  60. Flowers M, Hamm PB, **Carter AH**, Murray TD (2012) Reaction of winter wheat cultivars and breeding lines to soilborne wheat mosaic. *Plant Disease Management Reports* 6:CF025 (3,5)
  61. Lanning, SP, Hucl P, Pumphrey M, **Carter AH**, Lamb PF, Carlson GR, Wichman DM, Kephart KD, Spaner D, Martin JM, Talbert LE (2012) Agronomic performance of spring wheat as related to planting date and photoperiod response. *Crop Science* 52:1633-1639 (3,6)
  62. Poole GJ, Smiley RW, Paulitz TC, **Carter AH**, See DR, Garland-Campbell K (2012) Identification of microsatellite markers *Xgwm247* and *Xgwm299* linked to quantitative trait loci for resistance to *Fusarium crown rot* (*Fusarium pseudograminearum*) in two spring wheat populations. *Theoretical and Applied Genetics* 125:91-107 (4,6)
  63. Beecher BS, **Carter AH**, See DR (2012) Genetic mapping of a new family of seed-expressed polyphenol oxidase genes in wheat (*Triticum aestivum* L.). *Theoretical and Applied Genetics* 124:1463-1473 (3,4,5,6)
  64. **Carter AH**, Santra DK, Kidwell KK (2012) Assessment of the effect of the *GPC-B1* allele on senescence rate, grain protein concentration and mineral content in hard red spring wheat (*Triticum aestivum* L.) from the Pacific Northwest region of the USA. *Plant Breeding* 131:62-68 (3,4,5,6)

65. **Carter AH**, Garland-Campbell K, Morris C, Kidwell KK (2012) Chromosomes 3B and 4D are associated with several milling and baking quality traits in a soft white spring wheat (*Triticum aestivum* L.) population. *Theoretical and Applied Genetics* 124:1079-1096 **(1,2,3,4,5,6)**
66. Higginbotham RW, Jones SS, **Carter AH** (2011) Adaptability of wheat cultivars to a late-planted no-till fallow production system. *Sustainability* 3:1224-1233 **(2,3,4,6)**
67. **Carter AH**, Garland-Campbell K, Kidwell KK (2011) Genetic mapping of quantitative trait loci associated with important agronomic traits in the spring wheat (*Triticum aestivum* L.) cross ‘Louise’ by ‘Penawawa’. *Crop Science* 51:84-95 **(1,3,4,5,6)**
68. **Carter AH**, Chen XM, Garland-Campbell K, Kidwell KK (2009) Identifying QTL for high-temperature adult-plant resistance to stripe rust (*Puccinia striiformis* f. sp. *tritici*) in the spring wheat (*Triticum aestivum* L.) cultivar ‘Louise’. *Theoretical and Applied Genetics* 119:1119-1128 **(3,4,5,6)**
69. Murphy KM, **Carter A**, Zemetra RS, Jones SS (2008) Karyotype and ideogram analyses of four wheatgrass cultivars for use in perennial wheat breeding. *Journal of Sustainable Agriculture* 31:137-149 **(6)**
70. Leonard J, Watson C, **Carter A**, Hansen J, Zemetra R, Santra D, Campbell K, Riera-Lizarazu O (2008) Identification of a candidate gene for the wheat endopeptidase *Ep-D1* locus and two other STS markers linked to the eyespot resistance gene *Pch1*. *Theoretical and Applied Genetics* 116:261-270 **(3,6)**
71. **Carter AH**, Hansen J, Koehler T, Thill DC, Zemetra RS (2007) The effect of Imazamox application timing and rate on imazamox resistant wheat cultivars in the Pacific Northwest. *Weed Technology* 21:895-899 **(1,3,4,5,6)**

#### VARIETY/GERMPLASM RELEASE

1. Garland-Campbell K, Allan RE, Carter AH, DeMacon P, Klarquist E, Wen N, Chen X, Steber CM, Morris C, See D, Esser A, Engle D, Higginbotham R, Mundt C, Murray TD (2020) Registration of ‘Castella’ soft white winter club wheat. *Journal of Plant Registrations Submitted* **(2,3,6)**
2. Strauss NM, Wiersma A, DeMacon P, Klarquist E, **Carter AH**, Garland-Campbell KA, Olson E (2020) Registration of the Wheat D-Genome Nested Association Mapping Population. *Journal of Plant Registrations Early View* doi:10.1002/plr2.20078 **(2,3,6)**
3. Gill KS, Kumar N, Randhawa HS, Murphy K, **Carter AH**, Morris CF, Higginbotham RW, Engle DA, Guy SO, Lyon D, Murray TD, Chen XM, Schillinger WF (2020) Registration of ‘Resilience CL+’ soft white winter wheat. *Journal of Plant Registrations Early View* doi:10.1002/plr2.20118 **(3,6)**
4. **Carter AH**, Balow KA, Shelton GB, Burke AB, Hagemeyer KE, Stowe A, Worapong J, Higginbotham RW, Chen XM, Engle DA, Murray TD, Morris CF (2020) Registration of ‘Stingray CL+’ soft white winter wheat. *Journal of Plant Registrations Early View* doi:10.1002/plr2.20109 **(1,2,3,4,5,6)**
5. **Carter AH**, Balow KA, Shelton GB, Burke AB, Hagemeyer KE, Stowe A, Worapong J, Higginbotham RW, Chen XM, Engle DA, Murray TD, Morris CF (2020) Registration of ‘Devote’ soft white winter wheat. *Journal of Plant Registrations Early View* doi:10.1002/plr2.20079 **(1,2,3,4,5,6)**
6. **Carter AH**, Balow KA, Shelton GB, Burke AB, Hagemeyer KE, Stowe A, Worapong J, Higginbotham RW, Chen XM, Engle DA, Murray TD, Morris CF (2020) Registration of

- 'Scorpio' hard red winter wheat. Journal of Plant Registrations **Early View**  
doi:10.1002/plr2.20076 **(1,2,3,4,5,6)**
7. **Carter AH**, Kidwell KK, DeMacon V, Shelton G, Burke A, Balow K, Herr A (2020) Registration of 'Louise'/'Penawawa' Spring Wheat Recombinant Inbred Line Mapping Population. Journal of Plant Registrations 14:474-480 doi:10.1002/plr2.20077 **(1,2,3,4,5,6)**
  8. **Carter AH**, Balow KA, Shelton GB, Burke AB, Hagemeyer K, Worapong J, Higginbotham RW, Chen XM, Engle DA, Murray TD, Morris CF (2020) Registration of 'Purl' soft white winter wheat. Journal of Plant Registrations 14:398-405doi:10.1002/plr2.20069 **(1,2,3,4,5,6)**
  9. Gill KS, Kumar N, Randhawa HS, **Carter AH**, Yenish J, Morris CF, Baik B, Higginbotham RW, Guy SO, Engle DA, Chen XM, Murray TD, Burke IC, Lyon D (2020) Registration of 'Curiosity CL+' soft white winter wheat. Journal of Plant Registrations 14:377-387 doi:10.1002/plr2.20066 **(3,6)**
  10. Gill KS, Kumar N, Randhawa HS, **Carter AH**, Yenish J, Morris CF, Baik B-K, Higginbotham RW, Guy SO, Engle DA, Chen XM, Murray TD, Lyon D (2020) Registration of 'Mela CL+' soft white winter wheat. Journal of Plant Registrations 14:144-152 doi:10.1002/plr2.20006 **(3,6)**
  11. Balow K, Shelton G, Burke A, Hagemeyer K, Klarquist E, Froese P, Kruse EB, Carle SW, Roa A, Nielsen N, **Carter AH** (2019) Registration of the Finch-Eltan Winter Wheat Recombinant Inbred Mapping Population. Journal of Plant Registrations 13:287-293 **(1,2,3,4,5,6)**
  12. Wiersma AT, Whetten RB, Zhang G, Sehgal SK, Kolb FL, Poland JA, Mason RE, **Carter AH**, Cowger C, Olson EL (2018) Registration of two wheat germplasm lines fixed for *Pm58*. Journal of Plant Registrations 12:270-273 **(2,6)**
  13. **Carter AH**, Jones SS, Balow KA, Shelton GB, Burke AB, Lyon SR, Higginbotham RW, Chen XM, Engle DA, Murray TD, Morris CF (2017) Registration of 'Jasper' soft white winter wheat. Journal of Plant Registrations 11:263-268. **(1,2,3,4,5,6)**
  14. **Carter AH**, Jones SS, Lyon SR, Balow KA, Shelton GB, Burke A, Higginbotham RW, Schillinger WF, Chen XM, Engle DA, Morris CF (2017) Registration of 'Sequoia' hard red winter wheat. Journal of Plant Registrations 11:269-274. **(1,2,3,4,5,6)**
  15. **Carter AH**, Kidwell KK, Balow, KA, Burke A, Shelton GB, Higginbotham RW, DeMacon V, Lewien MJ, Chen XM, Engle DA, Morris CF (2017) Registration of 'Earl' hard white winter wheat. Journal of Plant Registrations 11:275-280. **(1,2,3,4,5,6)**
  16. Garland-Campbell K, **Carter AH**, Jones SS, Chen X, DeMacon P, Higginbotham R, Engle D, Guy SO, Mundt CC, Murray TD, Morris CF, See D (2017) Registration of 'Pritchett' Soft White Winter Club Wheat. Journal of Plant Registrations 11:152-158. **(3,6)**
  17. **Carter AH**, Kidwell KK, DeMacon V, Shelton GB, Higginbotham RW, Balow KA, Hansen J, Chen XM, Engle DA, Baik B, Morris CF (2015) Registration of 'Sprinter' wheat. Journal of Plant Registrations 9:196-200. **(1,2,3,4,5,6)**
  18. **Carter AH**, Jones SS, Cai X, Lyon SR, Balow KA, Shelton GB, Higginbotham RW, Chen XM, Engle DA, Baik B, Guy SO, Murray TD, Morris CF (2014) Registration of 'Puma' wheat. Journal of Plant Registrations 8:273-278. **(1,2,3,4,5,6)**
  19. **Carter, AH**, Jones SS, Shelton GB, Higginbotham R, Lyon S, Balow K, Guy S, Baik B, Engle DA, Morris C, Chen XM (2013) Registration of 'Otto' wheat. Journal of Plant Registrations 7:195-200. **(1,2,3,4,5,6)**

20. Kidwell KK, Shelton GB, DeMacon VL, Kuehner JS, Baik B, Engle DA, Bosque-Pérez NA, Burke A, **Carter AH**, Chen XM (2009) Registration of ‘Whit’ wheat. *Journal of Plant Registration* 3:279-282. **(1,2,3,4,5,6)**
21. Kidwell KK, Shelton GB, DeMacon VL, Chen XM, Kuehner JS, Baik B, Engle DA, **Carter AH**, Bosque-Pérez NA (2009) Registration of ‘Kelse’ Wheat. *Journal of Plant Registrations* 3:269-272. **(3,6)**

#### INVITED BOOK CHAPTER

1. Murphy KM, **Carter AH**, Jones SS 2013. Evolutionary breeding and climate change. Chapter 9, pp 377-389. *In* C. Kole ed, *Genomics and Breeding for Climate-Resilient Crops*, Vol. 1 Concepts and Strategies. Springer-Verlag Berlin Heidelberg. **(5,6)**
2. **Carter AH**, Walker CA, Kidwell KK 2010. Chapter 2: Breeding for dual-purpose hard white wheat in the US: Noodle and Pan breads. pp 25-56. *In* G. Hou ed, *Asian Noodles: Science, Technology, and Processing*. John Wiley & Sons, Inc. **(1,5,6)**

#### EXTENSION REPORTS

1. **Carter, A.**, K. Balow, A. Burke, K. Hagemeyer, G. A. Stowe, and J. Worapong. 2020. Winter Wheat Breeding and Genetics at WSU. p. 56. *In* Crow, S. and Schillinger W. (eds). “2020 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 20-1.
2. Herr, A., and **A. Carter**. 2020. Picture This: Using a Bird’s-Eye View to Improve Genetic Gain in a Wheat Breeding Program. p. 61. *In* Crow, S. and Schillinger W. (eds). “2020 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 20-1.
3. Merrick, L.F., **A.H. Carter**, X. Chen, and B.P. Ward. 2020. Genomic Selection of Stripe Rust Resistance in a Wheat Breeding Program. p. 64. *In* Crow, S. and Schillinger W. (eds). “2020 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 20-1.
4. Sandhu, K., P. Mihalyov, M. Lewien, M. Pumphrey, and **A. Carter**. 2020. Integrating Spectral Information and Genomic Selection for Predicting Grain Protein Content in Wheat. p. 66. *In* Crow, S. and Schillinger W. (eds). “2020 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 20-1.
5. Wigen, J., S. Sjoberg, K.G. Campbell, **A.H. Carter**, and C.M. Steber. 2020. Mapping of Genes/Loci Controlling Preharvest Sprouting and Emergence in Northwest Wheat. p. 69. *In* Crow, S. and Schillinger W. (eds). “2020 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 20-1.
6. Merrick, L.F., **A.H. Carter**, and B.P. Ward. 2020. Genomic Selection of Seedling Emergence in a Wheat Breeding Program. p. 70. *In* Crow, S. and Schillinger W. (eds). “2020 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 20-1.



7. **Carter, A.**, G. Shelton, K. Balow, A. Burke, K. Hagemeyer, T. See, and A. Kondratiuk. 2019. Winter Wheat Breeding and Genetics at Washington State University. p. 46. *In* Crow, S. and Schillinger W. (eds). "2019 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 19-1.
8. Dixon, L., B. Bellinger, and **A. Carter**. 2019. A Gravimetric Method to Monitor Plant Transpiration Under Water Stress Conditions. p. 49. *In* Crow, S. and Schillinger W. (eds). "2019 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 19-1.
9. Sjoberg, S., C. Steber, and **A. Carter**. 2018. Examining the Relationship Between Seedling Emergence and Coleoptile Length in Pacific Northwest Breeding Lines. p. 17. *In* Crow, S. and Schillinger W. (eds). "2018 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 18-1.
10. Dixon, L., J. Godoy, and **A. Carter**. 2018. Genome-Wide Association Study of Carbon Isotope Discrimination in an Elite Panel of Pacific Northwest Winter Wheat Genotypes. p. 19. *In* Crow, S. and Schillinger W. (eds). "2018 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 18-1.
11. Kruse, E., T. Murray, D. Skinner, and **A. Carter**. 2018. Winter Wheat that Weathers the Winter. p. 22. *In* Crow, S. and Schillinger W. (eds). "2018 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 18-1.
12. **Carter, A.**, K. Balow, A. Burke, J. Godoy, K. Hagemeyer, A. Kondratiuk, T. See, and G. Shelton. 2018. Winter Wheat Breeding and Genetics at Washington State University. p. 13. *In* Crow, S. and Schillinger W. (eds). "2018 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 18-1.
13. Horgan, A., **A. Carter**, K. Campbell, C. Steber. 2018. Interaction of Gibberellins-A Seed Application, Dwarfing Alleles, and Innate Varietal Emergence Capabilities on Wheat Seedling Emergence. p. 14. *In* Crow, S. and Schillinger W. (eds). "2018 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 18-1.
14. Godoy, J. M. Huang, Z. Zhang, and **A. Carter**. 2018. Genomic Selection for End-Use Quality Traits in Soft White Wheat (*Triticum aestivum* L.) p. 16. *In* Crow, S. and Schillinger W. (eds). "2018 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 18-1.
15. Roa, A.N., N.S. Nielsen, J. Godoy, E.B. Kruse, T.L. Stubbs, and **A.H. Carter**. 2018. Predicting Winter Wheat Straw Decomposition p. 31. *In* Crow, S. and Schillinger W. (eds). "2018 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 18-1.
16. Sjoberg, S., C. Steber, K. Garland-Campbell, and **A. Carter**. 2017. The Low Falling Number Problem of Wheat: Applying Knowledge about Seed Biology to a Real-World

- Issue p. 24. *In* Crow, S. and Schillinger W. (eds). “2017 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 17-1.
17. Martinez, S. S. Beck, D. Skinner, D. See, **A. Carter**, K. Garland-Campbell, and C. Steber. 2017. Identification of a Locus Corresponding to the Preharvest Sprouting Tolerance Gene ERA8 in Wheat (*Triticum aestivum* L.) p. 30. *In* Crow, S. and Schillinger W. (eds). “2017 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 17-1.
  18. **Carter, A.**, G. Shelton, K. Balow, and A. Burke. 2016. Winter Wheat Breeding and Genetics. p. 56. *In* Crow, S. and Schillinger W. (eds). “2016 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 16-1.
  19. Martinez, S., R. Parveen, K. Garland-Campbell, **A. Carter**, and C. Steber. 2016. Looking at Falling Numbers and Sprouting Scores to Determine Preharvest Sprouting Susceptibility and Tolerance in PNW Winter Wheat. p. 58. *In* Crow, S. and Schillinger W. (eds). “2016 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 16-1.
  20. Kumar, N, H.S. Randhawa, A. Carter, C. Morris, B. Baik, R. Higginbotham, D. Engle, S. Guy, T. Murray, I. Burke, D. Lyon, X. Chen, and K. Gill. 2015. Two-Gene Clearfield Soft White Winter Wheat Varieties: Curiosity CL+ and Mela CL+. p. 56. *In* Crow, S. and Schillinger W. (eds). “2015 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
  21. Martinez, S., R. Parveen, K. Garland-Campbell, M. Pumphrey, **A. Carter**, and C. Steber. 2015. Preharvest Sprouting Tolerance and Susceptibility in PNW Winter Wheat. p. 66. *In* Crow, S. and Schillinger W. (eds). “2015 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
  22. Stubbs, T., A. Kennedy, and **A. Carter**. 2015. Residue Decomposition Potential of a Finch x Eltan Breeding Population. p. 65. *In* Crow, S. and Schillinger W. (eds). “2015 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
  23. Jernigan, K., C. Morris, M. Pumphrey, K. Garland-Campbell, and **A. Carter**. 2015. Genetic Mapping of Quantitative Trait Loci Associated with End-Use Quality Traits in Soft White Winter Wheat. p. 64. *In* Crow, S. and Schillinger W. (eds). “2015 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
  24. Carle, S., **A. Carter**, and K. Garland-Campbell. 2015. Finding the Genetic Causes of Freezing-Tolerance in Washington Winter Wheat. p. 60. *In* Crow, S. and Schillinger W. (eds). “2015 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
  25. **Carter, A.**, G. Shelton, K. Balow, A. Burke, and T. Stubbs. 2015. Winter Wheat Breeding and Genetics. p. 55. *In* Crow, S. and Schillinger W. (eds). “2015 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.

26. Klarquist, E., and **A. Carter**. 2015. 6B and 4A QTLs for Stripe Rust (*Puccinia striiformis* f. sp. *tritici*) Resistance in Soft White Winter Wheat (*Triticum aestivum* L.) Varieties 'Finch' and 'Eltan'. p. 68. *In* Crow, S. and Schillinger W. (eds). "2015 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
27. Gizaw, S., K. Garland-Campbell, and **A. Carter**. 2015. Characterization of Pacific Northwest Winter Wheat for Drought Adaption and Yield Potential Using Agronomic Traits and Spectral Reflectance Indices. p. 63. *In* Crow, S. and Schillinger W. (eds). "2015 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
28. Kruse, E., T. Murray, D. Skinner, and **A. Carter**. 2015. Mold & Cold: The Solution is Sweet in Winter Wheat. p. 55. *In* Crow, S. and Schillinger W. (eds). "2015 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
29. Stubbs, T., V. DeMacon, M. Wang, S. Sankaran, M. Pumphrey, and **A. Carter**. 2015. High-Throughput Field Phenomics Project. p. 57. *In* Crow, S. and Schillinger W. (eds). "2015 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
30. Tuttle, K., T. Harris, **A. Carter**, M. Pumphrey, and C. Steber. 2015. Late Maturity Alpha-Amylase (LMA): Reducing the Risk of Low Falling Numbers. p. 57. *In* Crow, S. and Schillinger W. (eds). "2015 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 15-1.
31. **Carter, A.**, G. Shelton, R. Higginbotham, K. Balow, and A. Burke. 2014. Winter Wheat Breeding and Genetics. p. 23. *In* Crow, S. and Schillinger W. (eds), "2014 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 14-1.
32. Kumar, N., H.S. Randhawa, **A. Carter**, C. Morris, B. Baik, R. Higginbotham, D. Engle, S. Guy, T. Murray, I. Burke, D. Lyon, X. Chen, and K. Gill. 2014. 'Curiosity CL+' and 'Mela CL+': Two New 2-Gene Imi Soft White Winter Wheat Varieties. P. 24. *In* Crow, S. and Schillinger W. (eds), "2014 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 14-1.
33. Tuttle, K., T. Harris, **A. Carter**, M. Pumphrey, and C. Steber. 2014. Cold-induced LMA in Spring Wheat: A Potential Cause of Low Falling Numbers. p. 26. *In* Crow, S. and Schillinger W. (eds), "2014 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 14-1.
34. Jernigan, K.L., C.F. Morris, M.O. Pumphrey, K.A. Garland-Campbell, and **A.H. Carter**. 2014. Genetic Mapping of Quantitative Trait Loci Associated with Important End-Use Quality Traits in Soft White Wheat. p. 29. *In* Crow, S. and Schillinger W. (eds), "2014 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 14-1.
35. Klarquist, E.F., and **A.H. Carter**. 2014. Identification of QTL for Stripe Rust Resistance in the PNW Cultivars Finch and Eltan. p. 30. *In* Crow, S. and Schillinger W. (eds), "2014

- Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 14-1.
36. Martinez, S.A., T.J. Harris, R.S. Parveen, K. Garland-Campbell, **A.H. Carter**, M.O. Pumphrey, S.O. Guy, and C.M. Steber. 2014. Determining Preharvest Sprouting Tolerance and Falling Numbers in Soft White Wheat. p. 32. *In* Crow, S. and Schillinger W. (eds), “2014 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 14-1.
  37. **Carter, A.**, G. Shelton, R. Higginbotham, K. Balow, and A. Burke. 2013. Winter Wheat Breeding and Genetics. p. 24. *In* Warriner, C. and Schillinger W. (eds), “2013 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 13-1.
  38. Martinez, S.A., K. Garland-Campbell, **A.H. Carter**, M.O. Pumphrey, S.O. Guy, and C.M. Steber. 2013. Genetic Variation in Preharvest Sprouting. p. 29. *In* Warriner, C. and Schillinger W. (eds), “2013 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 13-1.
  39. Jernigan, K.L., C.F. Morris, M.O. Pumphrey, K.A. Garland-Campbell, and **A.H. Carter**. 2013. Genetic Mapping of Quantitative Trait Loci Associated with Important End-Use Quality Parameters in Soft White Winter Wheat. p. 32. *In* Warriner, C. and Schillinger W. (eds), “2013 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 13-1.
  40. **Carter, A.**, G. Shelton, R. Higginbotham, K. Balow, and J. Hansen. 2012. Winter Wheat Breeding and Genetics. p. 16. *In* Marsh, D. and Huggins, D. (eds), “2012 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 10-2.
  41. Koenig R., K. Schroeder, **A. Carter**, M. Pumphrey, T. Paulitz, K. Campbell, and D. Huggins. 2011. Soil Acidity and Aluminum Toxicity in the Palouse Region of the Pacific Northwest. Washington State University Extension Fact Sheet FS050E.
  42. **Carter, A.**, G. Shelton, R. Higginbotham, K. Balow, and J. Hansen. 2010. Winter Wheat Breeding and Genetics. p. 16. *In* Marsh, D. and Huggins, D. (eds), “2010 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 10-2.
  43. Kumar, N., P. Reisenauer, S.R. Maqbool, B.-K. Baik, C. Morris, **A. Carter**, J. Yenish, and K.S. Gill. 2010. Developing Two-gene Clearfield Wheat Varieties through Marker-Assisted Background Selection. p. 19. *In* Marsh, D. and Huggins, D. (eds), “2010 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 10-2.
  44. **Carter, A.**, D. Santra, M. Santra, V. DeMacon, G. Shelton, W. Nyongesa and K. Kidwell. 2009. Application of Biotechnology to Spring Wheat Variety Improvement. p. 21. *In* Guy, S., Huggins, D. and Marsh, D. (eds), “2009 Dryland Field Day Abstracts: Highlights of Research Progress”. Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 09-1.
  45. Kidwell, K., G. Shelton, V. DeMacon, W. Nyongesa and **A. Carter**. 2009. Improving spring wheat varieties for the Pacific Northwest. p. 20. *In* Guy, S., Huggins, D. and Marsh,

- D. (eds), "2009 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 09-1.
46. **Carter, A.**, D.R. See, K. Kidwell and K. Garland-Campbell. 2009. Marker Development and Marker-Assisted Selection for Improved Pest Resistance and End-Use Quality in Pacific Northwest Wheat. p. 26 *In* Guy, S., Huggins, D. and Marsh, D. (eds), "2009 Dryland Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 09-1.
  47. Kidwell, K., G. Shelton, V. DeMacon and **A. Carter**. 2008. Improving spring wheat varieties for the Pacific Northwest. p. 30. *In* Burns, J. (ed), "2008 Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 08-1.
  48. Santra, D., M. Santra, V. DeMacon, G. Shelton, **A. Carter** and K. Kidwell. 2008. Application of biotechnology to spring wheat variety improvement. p. 31. *In* Burns, J. (ed), "2008 Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 08-1.
  49. **Carter, A.**, D. See, K. Kidwell and K. Campbell. 2008. Marker development and marker-assisted selection for improved disease resistance and end-use quality in Pacific Northwest wheat. p. 32. *In* Burns, J. (ed), "2008 Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 08-1.
  50. **Carter, A.**, D. See, K. Kidwell and K. Campbell. 2007. Wheat applied genomics: Marker-assisted selection for improved disease resistance and end use quality in Pacific Northwest wheat. p. 20. *In* Burns, J. (ed), "2007 Field Day Abstracts: Highlights of Research Progress: Novel Solutions to Traditional Problems". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 07-1.
  51. Kidwell, K., G. Shelton, V. DeMacon and **A. Carter**. 2007. Improving spring wheat varieties for the Pacific Northwest. p. 19. *In* Burns, J. (ed), "2007 Field Day Abstracts: Highlights of Research Progress: Novel Solutions to Traditional Problems". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 07-1.
  52. Santra, D., M. Santra, V. DeMacon, G. Shelton, **A. Carter** and K. Kidwell. 2007. Application of biotechnology to spring wheat variety improvement. p. 21. *In* Burns, J. (ed), "2007 Field Day Abstracts: Highlights of Research Progress". Cooperative Extension, Washington State University, Dept. of Crop and Soil Sciences, Technical Report 07-1.