

Christopher S. Cramer

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Education

Ph.D. in Horticultural Science. Minor in Genetics and Statistics. Department of Horticultural Science, North Carolina State University, Raleigh. May, 1997. Dissertation: "Specific combining ability for fruit yield and shape, yield, and yield components of cucumber (*Cucumis sativus* L.) populations improved using recurrent selection."

M.S. in Plant Science. Department of Plant Science, University of Connecticut, Storrs. May, 1994. Master's Thesis: "In vitro and in vivo studies of *Mussaenda*."

B.S. in Horticulture. Department of Horticulture, The Pennsylvania State University, University Park. Graduated with honors and distinction. May, 1991. University Scholar's Program. Undergraduate Thesis. "Hybridization between diploid and tetraploid *Pelargonium xhortorum* Bailey."

Professional Experience

Professor of Exemplary Teaching. 7/17-6/20. Department of Plant and Environmental Sciences, New Mexico State University. Reorganized undergraduate horticulture major. Created PES student liaison program.

Jose Fernandez Memorial Chair of Crop Production. 7/13-6/16. Department of Plant and Environmental Sciences, New Mexico State University. Teach undergraduate courses in genetics, horticulture, and plant science and a graduate course in genetics. Develop high-yielding, high-quality, disease-resistant, bolting-resistant, onion varieties for southern New Mexico. Released 'NuMex Allure', 'NuMex Grandeur', 'NuMex Quasar', and 'NuMex Whisper'.

Professor of Horticulture. 7/08-Present. Department of Plant and Environmental Sciences, New Mexico State University. Teach undergraduate courses in genetics, horticulture, and plant science and a graduate course in genetics. Develop high-yielding, high-quality, disease-resistant, bolting-resistant, onion varieties for southern New Mexico. Released 'NuMex Allure', 'NuMex Fabian Garcia', 'NuMex Grandeur', 'NuMex Quasar', 'NuMex Radiance', 'NuMex Serenade', 'NuMex Silhouette', and 'NuMex Whisper'.

Associate Professor of Horticulture. 7/03-6/08. Department of Plant and Environmental Sciences, New Mexico State University. Teach undergraduate courses in plant science and horticulture, and graduate courses in genetics. Develop high-yielding, high-quality, disease-resistant, bolting-resistant, onion varieties for southern New Mexico. Released 'NuMex Mirage.' Investigate genetics involved in disease resistance, bolting resistance, firmness, male sterility, and bulb quality of onion.

Assistant Professor of Horticulture. 9/97-7/03. Department of Agronomy and Horticulture, New

Mexico State University. Taught undergraduate courses in plant science, horticulture, vegetable production, and organic vegetable production, and a graduate course in genetics. Developed and released five varieties ('NuMex Camino', 'NuMex Chaco', 'NuMex Crimson', 'NuMex Snowball' 'NuMex Solano') and two germplasm populations (NM 162, NM 172). Investigated genetics involved in disease resistance, bolting resistance, and bulb quality of onion.

Graduate Training

Theses and Dissertation advised:

- Kamal, N. 2016. Selection progress and cost benefit analysis of Iris yellow spot resistance in onions.
Mandal, S. 2016. Selection progress for Fusarium basal rot resistance in onions.
Singh, N. 2013. Selection progress for reduced Iris yellow spot symptom expression in onion.
Gibson, R. 2010. Determining redundancy of current and collected short-day, onion accessions.
Mohseni Mohgadam, M. 2010. Screening autumn- and winter-sown onion entries for *Iris yellow spot virus* resistance.
Saxena, A. 2009. An integrated approach for improving levels of resistance for Fusarium basal rot of onions.
Dullat, J.S. 2007. Effect of deficit irrigation during winter months on onion bulb quality in autumn-sown cultivars.
Kamal, N. 2007. Effect of harvesting stage on onion bulb quality and screening onion germplasm for resistance to black mold.
Saxena, A. 2007. Screening of onion cultivars for Fusarium basal rot and spatial distribution of *Fusarium oxysporum* f. sp. *cepae*.
Multani, P.S. 2007. Screening onion entries for *Iris yellow spot virus* resistance.
Molina-Bravo, R. 2006. A DNA extraction protocol for mature leaf tissue and molecular markers associated with pink root resistance in autumn sown onion cultivars.
Lopez, J.A. 2003. Screening onion cultivars for resistance to Fusarium basal rot.

Honors and Awards

- 2013 North American Colleges and Teachers of Agriculture Teaching Award for the College of Agricultural, Consumer, and Environmental Sciences, NMSU
2011 College of Agricultural, Consumer, and Environmental Sciences Distinguished Research Award, NMSU
Awarded Fall 2010 Online Course Improvement Program 1 Year Plus Fellowship, NMSU
Second place poster award, 7th Ann. University Research Council Research and Creative Activities Fair, Las Cruces, NM, Oct. 5, 2007.
Honorary N.M. State FFA Degree, 2003.
L. M. Ware Distinguished Research Award, Southern Region ASHS, 1997.
Graduate Student Professional Development Workshop, North Carolina State University, 1995.
First Place Oral Presentation Award, Collegiate Branch Forum, American Society for Horticultural Science, 1991

Refereed Journal Articles

- Cramer, C.S. 2019. 'NuMex Silhouette' onion. HortScience 54: (in press).
Kamal, N. and C.S. Cramer. 2018. Selection progress for resistance to Iris yellow spot in onions. HortScience 53:1088-1094.
Cramer, C.S. N. Kamal, and N. Singh. 2017. Evaluating Iris yellow spot disease incidence and severity in onion germplasm of varying leaf characteristics. HortScience 52:527-532.
Cramer, C.S. 2016. 'NuMex Quasar' onion. HortScience 51:1613-1615.

- Cramer, C.S. 2015. 'NuMex Allure' onion. *HortScience* 50:1735-1738.
- Bag, S., H.F. Schwartz, C.S. Cramer, M.J. Havey, and H.R. Pappu. 2014. *Iris yellow spot virus* (*Tospovirus: Bunyaviridae*): from obscurity to research priority. *Molecular Plant Path.* doi: 10.1111/mpp.12177.
- Schwartz, H.F., D. Alston, J. Alwang, M. Bartolo, T. Blunt, C.O. Boateng, B. Bunn, C.S. Cramer, W. Cranshaw, J. Davidson, M. Derie, J. Doran, K. Douce, D. Drost, L.J. du Toit, J. Gao, T. Gourd, B. Gugino, R. Hammon, J. Hardin, M. Hausbeck, G. Jibilian, J. Lafferty, J. LaForest, M.S. McMillan, ^[L]_[SEP]S. Krishna Mohan, J. Morrice, B.A. Nault, C. Nischwitz, G. Norton, K. Otto, H.R. Pappu, M. Petersen, R. Sampangi, B. Schroeder, W. Secor, S. Szostek, N. Tisserat, M.E. Uchanski, J. VanKirk, T. Waters, P. Wiriyajitsomboon, and C. Wohleb. 2014. Onion ipmPIPE: A coordinated effort to improve the management of onion thrips and *Iris yellow spot virus* for the U.S. onion industry. *Plant Health Progress* 15:172-183.
- Cramer, C.S., N. Singh, N. Kamal, and H.R. Pappu. 2014. Screening onion plant introduction accessions for tolerance to onion thrips and *Iris yellow spot*. *HortScience* 49:1253-1261.
- Cramer, C.S. 2014. 'NuMex Whisper' onion. *HortScience* 49:971-976.
- Cramer, C.S. 2014. 'NuMex Grandeur' onion. *HortScience* 49:350-353.
- Saxena, A. and C.S. Cramer. 2013. Metabolomics: A potential tool for breeding nutraceutical vegetables. *Adv. Crop Sci. Tech.* 1:106. doi:10.4172/acst.1000106.
- Cramer, C.S. and J.N. Corgan. 2012. 'NuMex Fabian Garcia' onion. *HortScience* 47:1369-1371.
- Kamal, N., A. Saxena, R.L. Steiner, and C.S. Cramer. 2012. Screening of New Mexico autumn-sown onions for black mold disease. *HortTechnology* 22:719-723.
- Cramer, C.S., S. Bag, H.F. Schwartz, and H.R. Pappu. 2011. Susceptibility of onion relatives (*Allium* spp) to *Iris yellow spot virus*. *Plant Disease* 95:1319.
- Kisha, T. and C.S. Cramer. 2011. Determining redundancy of short-day, onion accessions in a germplasm collection using microsatellite and TRAP markers. *J. Amer. Soc. Hort. Sci.* 136:129-134.
- Mohseni-Moghadam, M, C.S. Cramer, R.L. Steiner, and R. Creamer. 2011. Evaluating winter-sown onion entries for *Iris yellow spot virus* susceptibility. *HortScience* 46:1224-1229.
- Cramer, C.S. and J.N. Corgan. 2010. 'NuMex Serenade' onion. *HortScience* 45:1889-1892.
- Cramer, C.S. and J.N. Corgan. 2009. 'NuMex Radiance' onion. *HortScience* 44:820-823
- Larsen, T., A. Saxena, and C.S. Cramer. 2009. Relatedness of bulb firmness to other attributes of New Mexico onion entries. *Inter. J. Veg. Sci.* 15:206-217.
- Multani, P.S., C.S. Cramer, R.L. Steiner, and R. Creamer. 2009. Screening winter-sown onion entries for *Iris yellow spot virus* tolerance. *HortScience* 44:627-632.
- Saxena, A. and C.S. Cramer. 2009. Screening of onion seedlings for resistance against New Mexico isolates of *Fusarium oxysporum* f. sp. *cepae*. *J. Plant Pathology* 91:199-202.
- Cramer, C.S. and J.N. Corgan. 2007. 'NuMex Mirage' onion. *HortScience* 42:1719-1720.
- Cramer, C.S. 2006. Onion trait heritability and response from selection. *J. Amer. Soc. Hort. Sci.* 131:646-650.
- Gutierrez, J.A., R. Molina-Bravo, and C.S. Cramer. 2006. Screening winter-sown onion lines for *Fusarium* basal rot resistance. *HortTechnology* 16:177-181.
- Cramer, C.S. and J.A. Gutierrez. 2005. Screening autumn-sown onion lines for *Fusarium* basal rot resistance. *HortScience*. 40:157-160. Appeared on cover of journal issue.
- Falk, C., C.S. Cramer, and P. Pao. 2005. Teaching diversified organic crop production using the community supported agriculture farming system model. *J. Nat. Res. Life Sci. Ed.* 34:1-5. Appeared on cover of journal issue.
- Creamer, R., S. Sanogo, A. Moya, J. Romero, R. Molina-Bravo, and C. Cramer. 2004. *Iris yellow spot virus* on onion in New Mexico. *Plant Disease* 88:1049.

- Cramer, C.S. 2003. Performance of fall-sown onion cultivars using four seeding dates. *J. Amer. Soc. Hort. Sci.* 128:472-478.
- Cramer, C.S. and J.N. Corgan. 2003. 'NuMex Camino' onion. *HortScience* 38:1251-1252.
- Cramer, C.S. and J.N. Corgan. 2003. 'NuMex Crimson' onion. *HortScience*. 38:306-307.
- Cramer, C.S. and J.N. Corgan. 2003. 'NuMex Solano' onion. *HortScience*. 38:308-310.
- Falk, C.L., P. Pao, and C.S. Cramer. 2003. An Organic Vegetable Production Class using the Community Supported Agriculture Farming System Model. *Revista Mexicana de Agronegocios*. 13:11-34. In English and Spanish.
- Cramer, C.S. and J.N. Corgan. 2001. 'NuMex Chaco' onion. *HortScience*. 36:1337-1338.
- Cramer, C.S. and J.N. Corgan. 2001. 'NuMex Snowball' onion. *HortScience*. 36:1339-1340.
- Cramer, C.S. 2001. Comparing open-pollinated and hybrid onion populations for New Mexico. *HortTechnology* 11:119-123.
- Cramer, C.S. 2000. Breeding and genetics of Fusarium basal rot resistance in onions. *Euphytica* 115:159-166.
- Cramer, C.S. and T.C. Wehner. 2000. Path analysis of the correlation between fruit yield and yield components of cucumber populations. *HortScience* 35:708-711.
- Cramer, C.S. 1999. Lab techniques for determining ploidy in plants. *HortTechnology* 9:954-956.
- Cramer, C.S. and M.J. Havey. 1999. Morphological, biochemical, and molecular markers of onions. *HortScience* 34:589-593.
- Cramer, C.S. and T.C. Wehner. 1999. Little heterosis for yield and yield components in hybrids of six cucumber inbreds. *Euphytica* 110:101-110.
- Cramer, C.S. and T.C. Wehner. 1999. Testcross performance of three selection cycles from four pickling cucumber populations. *J. Amer. Soc. Hort. Sci.* 124:257-261.
- Cramer, C.S., T.C. Wehner, and S.B. Donaghy. 1999. PATHSAS: A SAS computer program for path coefficient analysis of quantitative data. *J. Hered.* 90:260-262.
- Cramer, C.S. and M.P. Bridgen. 1998. Growth regulator effects on plant height of potted *Mussaenda* 'Queen Sirikit'. *HortScience* 33:78-81.
- Cramer, C.S. and T.C. Wehner. 1998. Fruit yield and yield component means and correlations of four slicing cucumber populations improved through six to ten cycles of recurrent selection. *J. Amer. Soc. Hort. Sci.* 123:388-395.
- Cramer, C.S. and T.C. Wehner. 1998. Performance of three selection cycles from four slicing cucumber populations hybridized to a tester. *J. Amer. Soc. Hort. Sci.* 123:396-400.
- Cramer, C.S. and M.P. Bridgen. 1997. Somatic embryogenesis and shoot proliferation of *Mussaenda* cultivars. *Plant Cell, Tissue, and Organ Culture* 50:135-138.
- Wehner, T.C. and C.S. Cramer. 1996. Gain for pickling cucumber yield and fruit shape using recurrent selection. *Crop Sci.* 36:1538-1544.
- Wehner, T.C. and C.S. Cramer. 1996. Ten cycles of recurrent selection for fruit yield, earliness, and quality in three slicing cucumber populations. *J. Amer. Soc. Hort. Sci.* 121:362-366.

Variety Release Notices

- Cramer, C.S. 2018. 'NuMex Silhouette' onion. NM Agric. Expt. Stn. Rel. Not., 14 pp.
- Cramer, C.S. 2015. 'NuMex Quasar' onion. NM Agric. Expt. Stn. Rel. Not., 15 pp.
- Cramer, C.S. 2015. 'NuMex Allure' onion. NM Agric. Expt. Stn. Rel. Not., 20 pp.
- Cramer, C.S. 2013. 'NuMex Grandeur' onion. NM Agric. Expt. Stn. Rel. Not., 21 pp.
- Cramer, C.S. 2013. 'NuMex Whisper' onion. NM Agric. Expt. Stn. Rel. Not., 29 pp.
- Cramer, C.S. 2013. Onion germplasm selected for resistance to Iris yellow spot. NM Agric. Expt Stn Rel. Not, 5 pp.
- Cramer, C.S. and J.N. Corgan. 2012. 'NuMex Fabian Garcia' onion. NM Agric. Expt Stn Rel. Not,

11 pp.

- Cramer, C.S. and J.N. Corgan. 2009. NuMex Serenade onion. N.M. Agric. Expt. Stn. Rel. Notic.
- Cramer, C.S. 2008. NuMex Radiance onion cultivar release. N.M. Agric. Expt. Stn.
- Cramer, C.S. 2006. NuMex Mirage onion cultivar release. N.M. Agr. Expt. Stn.
- Cramer, C.S. and J.N. Corgan. 2002. ‘NuMex Camino’ onion cultivar release. N.M. Agr. Expt. Stn.
- Cramer, C.S. and J.N. Corgan. 2002. ‘NuMex Crimson’ onion cultivar release. N.M. Agr. Expt. Stn.
- Cramer, C.S. and J.N. Corgan. 2002. ‘NuMex Solano’ onion cultivar release. N.M. Agr. Expt. Stn.
- Corgan, J.N. and C.S. Cramer. 2001. NM 162 and NM 182 onion germplasm. N.M. Agric. Expt. Stn. Germplasm Rel.
- Corgan, J.N. and C.S. Cramer. 2000. ‘NuMex Chaco’ onion cultivar release. N.M. Agr. Expt. Stn.
- Corgan, J.N. and C.S. Cramer. 2000. ‘NuMex Snowball’ onion cultivar release. N.M. Agr. Expt. Stn.

Plant Variety Protection Certificates

- Cramer, C.S. 2011. NuMex Serenade onion. PVP certificate 201000252. Plant Variety Protection Office, USDA.
- Cramer, C.S. 2009. NuMex Mirage onion. PVP certificate 200800024. Plant Variety Protection Office, USDA.
- Cramer, C.S. 2009. NuMex Radiance onion. PVP certificate 200900293. Plant Variety Protection Office, USDA.
- Cramer, C.S. and J.N. Corgan. 2003. ‘NuMex Camino’ onion. PVP certificate 200300313. Plant Variety Protection Office, USDA.
- Cramer, C.S. and J.N. Corgan. 2003. ‘NuMex Crimson’ onion. PVP certificate 200300212. Plant Variety Protection Office, USDA.
- Cramer, C.S. and J.N. Corgan. 2003. ‘NuMex Solano’ onion. PVP certificate 200300213. Plant Variety Protection Office, USDA.
- Cramer, C.S. and J.N. Corgan. 2001. ‘NuMex Chaco’ onion. Plant variety protection certificate 200000352. Plant Variety Protection Office, USDA.
- Cramer, C.S. and J.N. Corgan. 2001. ‘NuMex Snowball’ onion. Plant variety protection certificate 200000351. Plant Variety Protection Office, USDA.

Book Chapters

- Cramer, C.S. and T.C. Wehner. 2003. Path coefficient analysis, pp. 89-96. In: M. S. Kang (ed.). Formulas, Softwares, and Techniques for Geneticists and Breeders. Food Products Press, New York.
- Cramer, C.S. and M.P. Bridgen. 1997. I. 16. Micropropagation of *Mussaenda* cultivars, p. 214-224. In: Y.P.S. Bajaj (ed.). Biotechnology in agriculture and forestry. vol. 40. High-Tech and micropropagation VI. Springer-Verlag, Berlin/Heidelberg.

Professional Organizations

- New Mexico representative to Multistate Research Project – W3008 – “Integrated Onion Pest and Disease Management”, USDA, 2018-present.
- New Mexico representative to Multistate Research Project – W2008 – “Iris Yellow Spot Virus (IYSV), Other Diseases, and Thrips”, USDA, 2012-2018.
- New Mexico representative to and Chair (2009) of Multistate Research Project – W1008 – “Iris Yellow Spot Virus (IYSV) and Thrips”, USDA, 2006-2012.
- New Mexico representative to SCC080 – Multistate Research Project – “Plant Breeding”, USDA, 2006-present.
- New Mexico State University Teaching Academy, Distinguished Member 2006-2007, 2011-2012,

2015), Member (2004-2009, 2012-2014, 2016-2017). Membership in the NMSU Teaching Academy is based on participation. Distinguished membership requires 40 hours while membership requires 10 hours of attendance or equivalent within one academic year. American Society for Horticultural Science, National (1989- 2018) and Southern Region (1996-1997).
Root and Bulb Vegetable Crop Germplasm Committee, Agricultural Research Service, USDA (1998-2013), Chair (2005-2018).

Honorary Societies

Phi Kappa Phi, National Academic Honor Society, 1993.
Omicron Delta Kappa, National Leadership Honorary, 1991.
Gamma Sigma Delta (Honor Society of Agriculture), 1991, Secretary (New Mexico State Univ. chapter, 2000-2002)
Pi Alpha Xi, Honor Society for Floriculture, Landscape Horticulture, and Ornamental Horticulture, 1989, Iota Chapter Secretary (1995-1996).
Sigma Xi, The Scientific Research Society, President (New Mexico State Univ. chapter, 2014-2017), Vice-President (2012-2013), 2012-present.