

CURRICULUM VITAE

NAME

Schwartz, Howard F

ADDRESS

C202 Plant Science - BSPM
Plant Sciences

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EDUCATION

1977 Ph D, U OF NEBRASKA

1975 MS, U OF MINNESOTA

1970 BS, U OF NEBRASKA

OTHER POSITIONS

July 1, 1991 - June 30, 2015 Professor, Colorado State University.

(January 1, 2002 - June 30, 2015) Department Chairperson, Department

PUBLISHED WORKS

Books

Schwartz, H. F., Mohan, S. K. (2008). *Compendium of Onion and Garlic Diseases and Pests, 2nd Ed* (pp. 127). APS Press, St Paul, MN. (Published: January (1st Quarter/Winter) 2008)

Schwartz, H. F., Brick, M. A., Harveson, R. M., Franc, G. D. (2004). In Schwartz, H.F., Brick, M. A., Harveson, R. M., Franc, G. D. (editors) (Ed.), *Dry bean production and integrated pest management Regional Bull* (pp. 167). Fort Collins, Colorado: CSU, Bulletin No 562A. (Published: January (1st Quarter/Winter) 2004)

Schwartz, H. F., Mohan, S. K. (1995). *Compendium of Onion and Garlic Diseases* (pp. 54). American Phytopath Soc, St Paul, MN. (Published: January (1st Quarter/Winter) 1995)

Refereed Journal Articles

Szostek, S., Schwartz, H. F. (in press). Overwintering sites of Iris yellow spot virus and Thrips tabaci (Thysanoptera:Thripidae) in Colorado. *Southwestern Entomologist*. (Accepted: May 2015)

Viteri, D. M., Otto, K., Teran, H., Schwartz, H. F., Singh, S. P. (2015). Use of four Sclerotinia sclerotiorum isolates of different aggressiveness with multiple inoculations and evaluations to select common beans with high levels of white mold resistance. *Euphytica*. (Published: January (1st Quarter/Winter) 2015)

Schwartz, H. F., Gent, D. H., Fichtner, S. M., Otto, K., Boateng, C. O., Szostek, S., Cranshaw, W. S., Mahaffey, L. A. (2014). Thrips tabaci (Thysanoptera: Thripidae) and Iris yellow spot virus associated with onion transplants, onion volunteers and weeds in Colorado baci). *Southwestern Entomologist*, 39(4), 691-704. www.bioone.org/doi/pdf/10.3958/059.039.0401 (Published: December 2014)

- Bag, S., Schwartz, H. F., Cramer, C. S., Havey, M. J., Pappu, H. R. (2014). Pathogen Profile - Iris yellow spot virus (Tospovirus: Bunyaviridae): from obscurity to research priority. *Molecular Plant Pathology*. (Published: December 1, 2014)
- Schwartz, H. F., Alston, D., Alwang, J., Bartolo, M. E., Blunt, T. D., Boateng, C., Bunn, B., Cramer, C., Cranshaw, W. S., Davidson, J. W., Derie, M., Douce, K., Drost, D., du Toit, L., Gour, T., Gugino, B., Hammon, B., Hardin, J. G., Hausbeck, M., Jibilian, G., Lafferty, J., LaForest, J., McMillan, M. S., Mohan, K., Morrice, J., Nault, B., Nischwitz, C., Norton, G., Otto, K., Pappu, H., Petersen, M., Sampangi, R., Schroeder, B., Secor, W., Szostek, S., Tisserat, N. A., Uchanski, M., VanKirk, J., Waters, T., Wiriayajitsomboon, P., Wohleb, C. (2014). Onion ipmPIPE: A coordinated effort to improve the management of onion thrips and Iris yellow spot virus for onion growers and their industry. *APS Plant Health Progress*, 15, 172-183. <http://www.apsnet.org/publications/apsnetfeatures/Documents/2014/PHP-FE-14-0026.pdf> (Published: November 12, 2014)
- Boateng, C. O., H. M., Otto, K., Schwartz, H. F. (2014). Evaluation of onion germplasm for resistance to Iris yellow spot virus and/or onion thrips (*Thrips tabaci*). *Southwestern Entomologist*, 39, 237-260. (Published: July (3rd Quarter/Summer) 2014)
- Singh, S. P., Schwartz, H. F., Teran, H., Viteri, D., Otto, K. (2014). Pyramiding white mould resistance between and within common bean gene pools. *Canadian J. of Plant Science*, 94, 947-954. (Published: July (3rd Quarter/Summer) 2014)
- Sikora, E. J., Allen, T. W., Wise, K. A., Bergstrom, G., Bradley, C. A., Bond, J., Brown-Rytlewski, D., Chilvers, M., Damicone, J., DeWolf, E., Dorrance, A., Dufault, N., Esker, P., Fask, T. R., Giesler, L., Goldberg, N., Golod, J., Gomez, I.R.G., Grau, C., Grybauskas, A., Franc, G., Hammerschmidt, R., Hartman, G. L., Henn, R. A., Hershman, D., Hollier, G., Isakeit, T., Isard, S., Jacobsen, B., Jardine, D., Kemerait, R., Koenning, S., Langham, M., Malvick, D., Markell, S., Marois, J. J., Monfort, S., Mueller, D., Mueller, J., Mulrooney, R., Newman, M., Osborne, L., Padgett, G. B., Ruden, B. E., Rupe, J., Schneider, R., Schwartz, H. F., Shaner, G., Singh, S., Stromberg, E., Sweets, L., Tenuta, A., Vaiciunas, S., Yang, X. B., Young-Kelly, H., Zidek, J. (2014). A coordinated effort to manage soybean rust in North America: a success story in soybean disease monitoring. *APS Plant Health Progress*, 98, 864-875. (Published: July (3rd Quarter/Summer) 2014)
- Singh, S. P., Schwartz, H. F., Viteri, D. M., Teran, H., Otto, K. (2014). Introgressing white mold resistance from *Phaseolus coccineus* PI 439534 to common pinto bean. *Crop Science*, 54, 1026-1032. (Published: June 2014)
- Munoz, R. M., Lerma, M. L., Lunello, P., Schwartz, H. F. (2014). Iris yellow spot virus in Spain: Incidence, epidemiology and yield effect on onion crops. *J. of Plant Pathology*, 96(1), 97-103. (Published: January (1st Quarter/Winter) 2014)
- Webb, K., Case, J., Brick, M. A., Otto, K., Schwartz, H. F. (2013). Cross pathogenicity and vegetative compatibility of *Fusarium oxysporum* isolated from sugar beet. *Plant Disease*, 97, 1200-1206. (Published: 2013)
- Schwartz, H. F., Singh, S. P. (2013). Breeding common bean for resistance to white mold: A review. *Crop Science*, 53, 1832-1844. (Published: September 2013)
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- Singh, S. P., Teran, H., Schwartz, H. F., Otto, K., Debouck, D. G., Roca, W., Lema, M. (2013). White mold-resistant, interspecific common bean breeding line VRW 32 derived from *Phaseolus costaricensis*. *J. Plant Reg.*, 7(1), 95-99. (Published: January (1st Quarter/Winter) 2013)
- Bag, S., Schwartz, H. F., Pappu, H. R. (2012). Identification and characterization of biologically distinct isolates of Iris yellow spot virus (genus *Tospovirus*, family *Bunyaviridae*), a serious pathogen of onion. *Eur J Plant Pathol*, 134, 97-104. (Published: January (1st Quarter/Winter) 2012)
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- Brick, M. A., Ogg, J. B., Schwartz, H. F., Johnson, J. J., Judson, F. M., Singh, S. P., Miklas, P. N., Corrales, M. P. (2011). Registration of 'Croissant' Pinto Bean. *J of Plant Registration*, 5, 5-Jan. (Published: January (1st Quarter/Winter) 2011)
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- Cramer, C. S., Bag, S., Schwartz, H. F., Pappu, H. R. (2011). Susceptibility of onion relatives (*Allium* spp) to Iris yellow spot virus. *Plant Disease Note*, 1319. DOI: 10.1094/PDIS-11-10-0819 (Published: January (1st Quarter/Winter) 2011)
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- Schwartz, H. F., Gent, D. H., Fichtner, S. M., Khosla, R., Reich, R., Camper, M. A., Mchaffey, L. A., Cranshaw, W. S. (2010). Spatial and temporal distribution of Iris yellow spot virus and thrips in Colorado onion fields. *APS Plant Management Network*. doi: 10.1094/PHP-2010-0820-01-RS (Published: January (1st Quarter/Winter) 2010)
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- Schwartz, H. F., Langham, M. A.C., Golod, J., Tolin, S. A., LaForest, J., Cardwell, K. F. (2009). Legume ipmPIPE : The next evolution of web-based interactive tools for disease management and extension outreach. *APSnet*. www.apsnet.org/online/feature/ipmPIPE/ (Published: January (1st Quarter/Winter) 2009)
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- Wunsch, M. J., Dillon, M. A., Torres, R., Schwartz, H. F., Bergstrom, G. C. (2008). First report of brown root rot of alfalfa caused by *Phoma sclerotoides* in Colorado and New Mexico. *Plant Disease*, 92, 653. (Published: January (1st Quarter/Winter) 2008)
- Brick, M. A., Ogg, J. B., Singh, S. P., Schwartz, H. F., Johnson, J. J., Corrales, M. P. (2008). Registration of Drought-Tolerant, Rust-Resistant, High-Yielding Pinto Bean Germplasm Line CO46348. *J Plant Regist*, 2, 120-124. (Published: January (1st Quarter/Winter) 2008)
- Schwartz, H. F., Otto, K., Pappu, H. R. (2007). First report of Iris yellow spot virus in commercial leek (*Allium porrum*) in the United States. *Plant Dis*, 91, 113. (Published: January (1st Quarter/Winter) 2007)
- Hoepting, C. A., Schwartz, H. F., Pappu, H. R. (2007). First report of Iris yellow spot virus on onion in New York. *Plant Disease*, 91, 327. (Published: January (1st Quarter/Winter) 2007)
- Lang, J. M., Gent, D. H., Schwartz, H. F. (2007). Management of *Xanthomonas* leaf blight of onion with bacteriophages and a plant activator. *Plant Dis*, 91, 871-878. (Published: January (1st Quarter/Winter) 2007)
- Maxwell, J. J., Brick, M. A., Byrne, P. F., Schwartz, H. F., Shan, X., Ogg, J. B., Hensen, P. A. (2007). Quantitative trait loci linked to white mold resistance in common bean. *Crop Sci*, 47, 2285-2294. (Published: January (1st Quarter/Winter) 2007)
- Singh, S. P., Teran, H., Lema, M., Schwartz, H. F., Miklas, P. N. (2007). Registration of White Mold Resistant Dry Bean Germplasm Line A 195. *J Plant Regist*, 1, 62-63. (Published: January (1st Quarter/Winter) 2007)
- Lang, J. M., Gent, D. H., Schwartz, H. F. (2006). Alternative strategies for onion *Xanthomonas* leaf blight management. *Phytopathology*, 94, S56. (Published: January (1st Quarter/Winter) 2006)
- Lanier, W. T., Brewer, M. J., Peairs, F. B., Hein, G. L., Schwartz, H. F., Campbell, J. B., Blodgett, S. (2006). Development and assessment of an on-line High Plains Integrated Pest Management Guide for a regional audience. *American Entomologist*, 52, 30-35. (Published: January (1st Quarter/Winter) 2006)
- Schwartz, H. F., Otto, K., Teran, H., Lema, M., Singh, S. P. (2006). Inheritance of white mold resistance in *Phaseolus vulgaris* x *P-coccineus* crosses. *Plant Dis*, 90, 1167-1170. (Published: January (1st Quarter/Winter) 2006)
- Gent, D. H., du Toit, L. J., Fichtner, S. F., Mohan, S. K., Pappu, H. R., Schwartz, H. F. (2006). Iris yellow spot virus. *Plant Dis*, 90, 1468-1480. (Published: January (1st Quarter/Winter) 2006)
- Harveson, R. M., Schwartz, H. F., Vidaver, A. K., Lambrecht, P. A., Otto, K. (2006). New outbreaks of bacterial wilt of dry bean in Nebraska observed from field infections. *Plant Dis*, 90, 681. (Published: January (1st Quarter/Winter) 2006)
- Brick, M. A., Byrne, P. F., Schwartz, H. F., Ogg, J. B., Otto, K., Fall, A. L., Gilbert, J. (2006). Reaction to three races of fusarium wilt in the *Phaseolus vulgaris* core collection. *Crop Sci*, 46, 1245-1252. (Published: January (1st Quarter/Winter) 2006)
- Pappu, H. R., du Toit, L. J., Schwartz, H. F., Mohan, S. K. (2006). Sequence diversity of the nucleoprotein gene of iris yellow spot virus (genus *Tospovirus*, family *Bunyaviridae*) isolates from the western region of the

- United States. *Arch Virol*, 151, 1015-1023. (Published: January (1st Quarter/Winter) 2006)
- Gent, D. H., Lang, J. M., Schwartz, H. F. (2005). Epiphytic survival of *Xanthomonas axonopodis* pv *allii* and *X. axonopodis* pv *phaseoli* on leguminous hosts and onion. *Plant Dis*, 89, 558-564. (Published: January (1st Quarter/Winter) 2005)
- Gulya, T. J., Viranyi, F., Appel, J., Jardine, D., Schwartz, H. F. (2005). First Report of *Albugo tragopogonis* on Cultivated Sunflower in North America. *Plant Dis*, 86, 559. (Published: January (1st Quarter/Winter) 2005)
- Gent, D. H., Lang, J. M., Bartolo, M. E., Schwartz, H. F. (2005). Inoculum sources and survival of *Xanthomonas axonopodis* pv *allii* in Colorado. *Plant Disease*, 89, 507-514. (Published: January (1st Quarter/Winter) 2005)
- Gent, D. H., Schwartz, H. F. (2005). Management of *Xanthomonas* leaf blight of onion with a plant activator, biological control agents, and copper bactericides. *Plant Dis*, 89, 631-639. (Published: January (1st Quarter/Winter) 2005)
- Gent, D. H., Al-Saadi, A., Gabriel, D. W., Louws, F. J., Ishimaru, C. A., Schwartz, H. F. (2005). Pathogenic and genetic relatedness among *Xanthomonas axonopodis* pv *allii* and other pathovars of *X. axonopodis*. *Phytopathology*, 95, 918-925. (Published: January (1st Quarter/Winter) 2005)
- Brick, M. A., Schwartz, H. F., Ogg, J. B., Johnson, J. J., Judson, F. M. (2005). Registration of 'Grand mesa' pinto. *Crop Sci*, 45, 413. (Published: January (1st Quarter/Winter) 2005)
- Gent, D. h., Schwartz, H. F., Khosla, R. (2004). Distribution and incidence of Iris yellow spot virus in Colorado and its relation to onion plant population and yield. *Plant Dis*, 88, 446-452. (Published: January (1st Quarter/Winter) 2004)
- Gent, D. H., Schwartz, H. F., Ishimaru, C. A., Louws, F. J., Cramer, R. A., Lawrence, C. B. (2004). Polyphasic characterization of *Xanthomonas* strains from onion. *Phytopathology*, 94, 184-195. (Published: January (1st Quarter/Winter) 2004)
- Cramer, R. A., Byrne, P. F., Brick, M. A., Panella, L., Wickliffe, E., Schwartz, H. F. (2003). Characterization of *Fusarium oxysporum* isolates from common bean and sugar beet using pathogenicity assays and random-amplified polymorphic DNA markers. *J Phytopathol*, 151, 352-360. (Published: January (1st Quarter/Winter) 2003)
- Gent, D. H., Schwartz, H. F., Nissen, S. J. (2003). Effect of commercial adjuvants on vegetable crop fungicide coverage, absorption, and efficacy. *Plant Dis*, 87, 591-597. (Published: January (1st Quarter/Winter) 2003)
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- Singh, S. P., Teran, H., Gutierrez, J. A., Corrales, M. P., Schwartz, H. F., Morales, F. J. (2003). Registration of A 339, MAR 1, MAR 2, and MAR 3 angular-leaf-spot- and anthracnose-resistant common bean germplasm. *Crop Sci*, 43, 1886-1887. (Published: January (1st Quarter/Winter) 2003)
- Schwartz, H. F., Otto, K., Gent, D. H. (2003). Relation of temperature and rainfall to development of *Xanthomonas* and *Pantoea* leaf blights of onion in Colorado. *Plant Dis*, 87, 11-14. (Published: January (1st Quarter/Winter) 2003)
- McMillan, M. S., Schwartz, H. F., Otto, K. (2003). Sexual stage development of *Uromyces appendiculatus* and its potential use for disease resistance screening of *Phaseolus vulgaris*. *Plant Dis*, 87, 1133-1138. (Published: January (1st Quarter/Winter) 2003)

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- Brick, M. A., Schwartz, H. F., Ogg, J. B., Johnson, J. J., Judson, F. M., Pearson, C. H. (2002). Registration of 'Shiny Crow' black bean. *Crop Sci*, 42, 1751-1752. (Published: January (1st Quarter/Winter) 2002)
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- Swift, C. E., Wickliffe, E. R., Schwartz, H. F. (2002). Vegetative compatibility groups of *Fusarium oxysporum* f sp *cepae* from onion in Colorado. *Plant Dis*, 86, 606-610. (Published: January (1st Quarter/Winter) 2002)
- Fall, A. L., Byrne, P. F., Jung, G., Coyne, D. P., Brick, M. A., Schwartz, H. F. (2001). Detection and mapping of a major locus for *Fusarium* Wilt resistance in common bean. *Crop Sci*, 41, 1494-1498. (Published: January (1st Quarter/Winter) 2001)
- Hanson, L., Wickliffe, E., Hill, A., Schwartz, H. F., Panella, L. (2001). *Fusarium* in sugar beet and bean. *J Sugar Beet Res*, 38, 70. (Published: January (1st Quarter/Winter) 2001)
- Brick, M. A., Schwartz, H. F., Ogg, J. B., Johnson, J. J., Judson, F. M. (2001). Registration of 'Montrose' pinto bean. *Crop Sci*, 41, 260. (Published: January (1st Quarter/Winter) 2001)
- Schwartz, H. F., Otto, K. (2000). First report of a bulb decay of onion by *Enterobacter cloacae* in Colorado. *Plant Disease Note*, 84, 808. (Published: January (1st Quarter/Winter) 2000)
- Schwartz, H. F., Otto, K. (2000). First report of a leaf blight and bulb decay of onion by *Pantoea ananitas* in Colorado. *Plant Disease Note*, 84, 808. (Published: January (1st Quarter/Winter) 2000)
- Schwartz, H. F., Otto, K. (2000). First Report of a Leaf Blight of Onion Caused by *Xanthomonas campestris* in Colorado. *Plant Dis*, 84, 922. (Published: January (1st Quarter/Winter) 2000)
- Cross, H., Brick, M. A., Schwartz, H. F., Panella, L. W., Byrne, P. F. (2000). Inheritance of resistance to *Fusarium* wilt in two common bean races. *Crop Sci*, 40, 954-958. (Published: January (1st Quarter/Winter) 2000)
- Valle, R. V., Schwartz, H. F. (2000). Resistance of two bean lines to wilt by *Fusarium oxysporum* f sp *phaseoli* under different soil temperatures (in spanish). *Agro-Ciencia*, 16, 81-86. (Published: January (1st Quarter/Winter) 2000)
- Garrett, K. A., Schwartz, H. F. (1998). Epiphytic *Pseudomonas syringae* on dry beans treated with copper-based bactericides. *Plant Dis*, 82, 30-35. (Published: January (1st Quarter/Winter) 1998)
- Valle, R. V., Schwartz, H. F. (1998). Preliminary evidence on the physiological specialization of a Spanish isolate of *Fusarium oxysporum* f sp *phaseoli* to *Phaseolus vulgaris*. *Revista Mexicana de Fitopatologia*, 16(1), 12-17. (Published: January (1st Quarter/Winter) 1998)
- Miklas, P. N., Schwartz, H. F., Salgado, M. O., Nina, R., Beaver, J. S. (1998). Reaction of select tepary bean to ashy stem blight and *Fusarium* wilt. *Hortscience*, 33, 136-139. (Published: January (1st Quarter/Winter) 1998)
- Miklas, P. N., Grafton, K. F., Kelly, J. D., Schwartz, H. F., Steadman, J. R. (1998). Registration of four white

- mold resistant dry bean germplasm lines. *Crop Sci*, 38, 1728. (Published: January (1st Quarter/Winter) 1998)
- Valle, R. V., Schwartz, H. F., Diaz Minquez, J. M. (1997). Pathogenicity of *Fusarium oxysporum* f sp phaseoli isolates from Spain to *Phaseolus vulgaris*. *Plant Dis*, 81, 312. (Published: January (1st Quarter/Winter) 1997)
- Salgado, M. O., Schwartz, H. F., Brick, M. A. (1995). Inheritance of Resistance to a Colorado Race of *Fusarium-Oxysporum* F-Sp Phaseoli in Common Beans. *Plant Dis*, 79, 279-281. (Published: January (1st Quarter/Winter) 1995)
- Brick, M. A., Wood, D. R., Schwartz, H. F., Pearson, C. H., Ogg, J. B., Ballarin, N., Shanahan, J. F. (1995). Registration of Arapaho Pinto Bean. *Crop Sci*, 35, 1511-1512. (Published: January (1st Quarter/Winter) 1995)
- Fisher, A. G., Brick, M. A., Wood, D. R., Stack, M., Schwartz, H. F., Ogg, J. B., Pearson, C. H., Shanahan, J. F., Ballarin, M. (1995). Registration of Fisher Pinto Bean. *Crop Sci*, 35, 1511. (Published: January (1st Quarter/Winter) 1995)
- Salgado, M. O., Schwartz, H. F., Brick, M. A., Corrales, M. P. (1994). Resistance to *Fusarium-Oxysporum* F-Sp Phaseoli in Tepary Beans (*Phaseolus-Acutifolius*). *Plant Dis*, 78, 357-360. (Published: January (1st Quarter/Winter) 1994)
- Schwartz, H. F., McMillan, M. S., Lancaster, G. K. (1994). Volunteer Beans with Rust and White Mold Inocula in Winter-Wheat. *Plant Dis*, 78, 1216. (Published: January (1st Quarter/Winter) 1994)
- Bartolo, M. E., Schwartz, H. F., Schweissing, F. C. (1994). Yield and growth response of onion to simulated storm damage. *HortScience*, 29(12), 1465-1467. (Published: January (1st Quarter/Winter) 1994)
- Salgado, M. O., Schwartz, H. F. (1993). Physiological Specialization and Effects of Inoculum Concentration of *Fusarium-Oxysporum* F-Sp Phaseoli on Common Beans. *Plant Dis*, 77, 492-496. (Published: January (1st Quarter/Winter) 1993)

Refereed Chapters in Books

- Schwartz, H. F., Gent, D. H. (2015). The Dynamic World of the Genus *Xanthomonas*. *Xanthomonas* leaf blight of onion. In Nian Wang, Jeffrey B. Jones, George W. Sundin, Frank White, Saskia Hogenhout, Caroline Roper, Leonardo De La Fuente, and Jong Hyun Ham (Ed.), *Virulence Mechanisms of Plant Pathogenic Bacteria* (pp. 392-397). APS Press. (Published: May 2015)

Non-Refereed Journal Articles

- Johnson, J. J., Hain, J. P., Sauer, S. M., Larson, K., Jahn, C. E., Turner, M., Bartolo, M. E., Davidson, J. W., Brick, M. A., Schwartz, H. F., Vigil, M., Meyer, R., Jewell, K. S. (2014). 2013 Colorado Spring Crop Variety Performance Trial Results. *High Plains Journal*. (Published: January (1st Quarter/Winter) 2014)
- Schwartz, H. F., Brick, M. A. (2015). In H. F. Schwartz and M. A. Brick (Ed.), *Dry Bean Health Management and Production, 3rd Ed.* (3rd ed., pp. 1-160). Fort Collins, Colorado: Colorado State University. (Published: March 2015)
- Johnson, J. J., Brick, M. A., Schwartz, H. F., McMillan, M. S., Sauer, S. M., Bartolo, M. E., Davidson, J. W., Hain, J. P., Jewell, K. S., Ogg, J. B., Andales, A. A., Otto, K. (2012). *Making Better Decisions –2012 Colorado Dry Bean Variety Performance Trials*. Colorado State University Agric Exp Stn Technical Report TR 12-12, 14 pp. (Published: March 2012)

Johnson, J. J., Brick, M. A., Schwartz, H. F., Andales, A. A., Bartolo, M. E., Hain, J. P., Jewell, K. S., Sauer, S. M., McMillan, M. S., Ogg, J. B., Otto, K. (2011). *Making Better Decisions – 2011 Dry Bean Variety Performance Trials*. Colorado State University Agric Exp Stn Technical Report TR11-10, 12 pp. (Published: June 2011)

Schwartz, H. F., Langham, M. (2011). *LegumeipmPIPE – Overview of 2007-2011 Contributions to the Legume Industry* (vol. 55, pp. 35-36). Ann Rept Bean Improv Coop. (Published: March 2011)

Szostek, S., Schwartz, H. F. (2011). *A new research technique for thrips and IYSV* (vol. 27, pp. 14-15). OnionWorld. (Published: January (1st Quarter/Winter) 2011)

Schwartz, H. F. (2011). *Bacterial diseases of beans (revised)* (pp. 4). CSU Fact Sheet no 2 913. (Published: January (1st Quarter/Winter) 2011)

Harveson, R. M., Urrea, C. A., Schwartz, H. F. (2011). *Bacterial wilt of dry beans in western Nebraska*. Univ of Nebraska NebGuide G05-1562-A, 3 pp. (Published: January (1st Quarter/Winter) 2011)

Schwartz, H. F. (2011). *Botrytis, downy mildew and purple blotch of onion* (pp. 4). CSU Fact Sheet no. 2.941. (Published: January (1st Quarter/Winter) 2011)

Schwartz, H. F. (2011). *Root rots of dry beans (Revised)* (pp. 4). CSU Fact Sheet no 2.938. (Published: January (1st Quarter/Winter) 2011)

Schwartz, H. F. (2011). *Soil-borne diseases of onion (Revised)* (pp. 4). CSU Fact Sheet no 2.940. (Published: January (1st Quarter/Winter) 2011)

Schwartz, H. F., Gent, D. H. (2011). *Xanthomonas leaf blight of onion (Revised)* (pp. 4). CSU Fact Sheet no. 2.951. (Published: January (1st Quarter/Winter) 2011)

Schwartz, H. F., Langham, M. A.C., Tolin, S. A., Golod, J., LaForest, J., Cardwell, K. F. (2010). *A new option for generating, summarizing and disseminating real-time pest data to stakeholders* (vol. 53, pp. 24-25). Ann Rept Bean Improv Coop. (Published: March 2010)

Szostek, S. A., Schwartz, H. F. (2010). *Iris Yellow Spot Virus of Onion*. Fact Sheet, 4 pp (The Global Specialist, in collaboration with Nunhems Seed Co); printed in English & Spanish Spanish translation provided by my former student, Dr Rodolfo Velazquez, INIFAP-Zacatecas, Mexico. (Published: January (1st Quarter/Winter) 2010)

AES Report/Bulletin

Johnson, J. J., Brick, M. A., Schwartz, H. F., McMillan, M. S., Sauer, S. M., Bartolo, M. E., Davidson, J. W., Hain, J. P., Jewell, K. S., Ogg, J. B., Andales, A. A., Otto, K. (2013). *Making Better Decisions – 2013 Colorado Dry Bean Variety Performance Trials* (13-5 ed., pp. 14). Fort Collins, Colorado: CSU Agr. Exp. Station. (Published: November 2013)

Schwartz, H. F., Bartolo, M. E., Hardin, J. G., Cranshaw, W. S., Nissen, S. J., Szostek, S., Reddin, K., Cramer, C., Uchanski, M. E., Alston, D. G., Rost, D., du Toit, L. J., Pappu, H. R., Schroeder, B. K., Waters, T., Dutta, B., Srinivasan, R., Gitaitis, R. D., Nault, B. A. (2013). In H. F. Schwartz and M. E. Bartolo (Ed.), *Onion Health Management and Production* (pp. 104). Fort Collins, Colorado: CSU IPM Center. (Published: August 2013)

Article in Popular or Trade Magazine

Schwartz, H. F., Brick, M. A., Ogg, J. B., McMillan, M. S. (2015). *Agronomic practices enhance pinto bean production under semi-arid conditions* (vol. 58, pp. 115-116). Ann. Rept. Bean Improv. Coop.. (Published: March 2015)

Book Review

Schwartz, H. F. (2009). Bacterial wilt of common bean. *Bacterial Diseases of Plants in South Africa* (pp. 182-184). Briza Pub.. (Published: January (1st Quarter/Winter) 2009)

Schwartz, H. F., Mohan, S. K. (2008). In H. F. Schwartz and S. K. Mohan (Ed.), *Downy Mildew, pp. 32-35; Purple Blotch, pp. 38-41; Stemphylium Leaf Blight and Stalk Rot, pp. 45-47; Other Viral Disease, pp. 83-84; Dodder, pp. 85-86; Temperature Stress, pp. 95-96; Air Pollution, p. 96; Hail and Lightning Injury, pp. 96-97; Soil Acidity, (pp. 127)*. Schwartz, H F, and Mohan, S K (editors) *Compendium of Onion and Garlic Diseases and Pests, 2nd Ed.* (Published: January (1st Quarter/Winter) 2008)

Schwartz, H. F., Steadman, J. R., Hall, R., Forster, R. L. (2005). *Compendium of Bean Diseases, 2nd Ed* (pp. 109). APS Press. (Published: January (1st Quarter/Winter) 2005)

Forster, R. L., Steadman, J. R., Schwartz, H. F. (2000). Integrated management of bean diseases. In S. P. Singh (Ed.), *Bean Research, Production & Utilization - Proc of the Idaho Bean Workshop Celebrating 75 Years of Bean Research & Development and 50 Years of the Cooperative Dry Bean Nursery* (pp. 101 - 112). Twin Falls, Idaho: University of Idaho. (Published: January (1st Quarter/Winter) 2000)

Skoglund, L., Brown, W. M., Schwartz, H. F. (1999). *Cultural approaches to managing plant pathogens* (pp. 291 - 307). Handbook of Pest Management Edited by J R Ruberson, Marcel Dekker, Inc New York, NY ISBN # 0-8247-9433-8. (Published: January (1st Quarter/Winter) 1999)

Schwartz, H. F., Peairs, F. B. (1999). Integrated pest management. In S. P. Singh (Ed.), *Common Bean Improvement for the 21st Century* (0-7923-5887-2 ed., pp. 371-388). Boston, MA: Kluwer Pub, Boston. (Published: January (1st Quarter/Winter) 1999)

Hall, R., Schwartz, H. F. (1993). In William M. Bennett (Ed.), *Common bean* (pp. 143-147). Nutrient Deficiencies & Toxicities in Crop Plants Edited by W F Bennett Amer Phytopath Soc, St Paul, MN ISBN # 0-89054-151-5. (Published: January (1st Quarter/Winter) 1993)

CE Report/Bulletin/Factsheet

Schwartz, H. F., Panella, L. W., Brick, M. A., Byrne, P. F. (2013). *Fusarium Wilt and Yellows of Sugar Beet and Dry Bean*. CSU Bulletin. (Published: June 2013)

Harveson, R. M., Schwartz, H. F., Steadman, J. R. (2013). *Rust of Dry Beans*. CSU Bulletin. (Published: June 2013)

Harveson, R. M., Steadman, J. R., Schwartz, H. F. (2013). *White mold of dry beans*. CSU Fact Sheet no. 2.918 - 4 pgs. (Published: June 2013)

Harveson, R. M., Urrea, C. A., Schwartz, H. F. (2011). *Abiotic diseases of dry beans*. 4 pp, NebGuide EC1866, 12 pages. (Published: June 2011)

Harveson, R. M., Urrea, C. A., Schwartz, H. F. (2011). *Bacterial wilt of dry beans in western Nebraska (revised)*. NebGuide G05-1562. (Published: June 1, 2011)

Magazine/Trade Publication

Johnson, J. J., Hain, J. P., Sauer, S. M., Larson, K., Jewett, F. G., Jahn, C. E., Turner, M., Bartolo, M. E., Davidson, J. W., Brick, M. A., Schwartz, H. F., Vigil, M., Jewell, K. S. (2012). *2012 Colorado Spring Crop Variety Performance Trial Results*. High Plains Journal. (Published: December 2012)

Newsletter

Bauder, T. A., Doesken, N., Schwartz, H. F., Bartolo, M. E. (2009). *Demonstration of the Colorado Agricultural Meteorological Network (COAGMET) for Improved Irrigation and Pest Management in the Arkansas Valley* (3rd ed., vol. 26). Colorado Water - Colorado Water Institute. (Published: 2009)

Research Report

Singh, S. P., Schwartz, H. F., Steadman, J. R. (2014). *A new scale for white mold disease rating for the common bean cut-stem method of inoculation in the greenhouse* (vol. 57, pp. 231-232). Ann. Rept. Bean Improv. Coop.. (Published: April (2nd Quarter/Spring) 2014)

Heuberger, A. L., Robison, F. M., Prenni, J. E., Schwartz, H. F., Brick, M. A. (2014). *Changes in primary and secondary metabolism associated with tolerance to Sclerotinia sclerotiorum in dry bean* (vol. 57, pp. 59-60). Ann. Rept. Bean Improv. Coop.. (Published: April (2nd Quarter/Spring) 2014)

Schwartz, H. F., Brick, M. A., Ogg, J. B., McMillan, M. S. (2014). *Enhancement of dry bean production by soil ripping and irrigation interval* (vol. 57, pp. 149-150). Ann. Rept. Bean Improv. Coop.. (Published: April (2nd Quarter/Spring) 2014)

Schwartz, H. F., Otto, K., Viteri, D. M., Debouck, D. G., Singh, S. P. (2014). *Response of six wild Phaseolus costaricensis accessions to seven bacterial, fungal, and viral diseases of common bean* (vol. 57, pp. 241-242). Ann. Rept. Bean Improv. Coop.. (Published: April (2nd Quarter/Spring) 2014)

Schwartz, H. F., Brick, M. A., Ogg, J. B., McMillan, M. S. (2013). *Double row arrangement enhances pinto bean production for upright cultivars* (vol. 56, pp. 143-144). Ann. Rept. Bean Improv. Coop.. (Published: April (2nd Quarter/Spring) 2013)

Technical Report

Young, D. J., Tisserat, N. A., Schwartz, H. F., Camper, M. A. (2011). *Extension Integrated Pest Management – Coordination and Support Program for Colorado*. USDA CRIS Report. (Published: February 1, 2011)

Web Publication

Schwartz, H. F., Gent, D. H. (2012). *High Plains Integrated Pest Management Resource On-line IPM bulletin*. high plains IPM. www.highplainsipm.org (Published: January (1st Quarter/Winter) 2012)

PERFORMANCES, EXHIBITS, PRODUCTIONS (Visual/Performing Arts):

January 1, 1971 - June 30, 2015, Image Collection

PAPERS PRESENTED/SYMPOSIA/INVITED LECTURES/PROFESSIONAL MEETINGS/WORKSHOPS

November 3, 2014, "Mass spectrometry-based metabolic profiling reveals small molecules associated with physiological resistance to Sclerotinia sclerotiorum in dry edible bean", Annual Meeting of Crop Science Society, Crop Science, Heuberger, A. L. (Author & Presenter), Brick, M. A. (Author), Schwartz, H. F. (Author), Robison, F. M. (Author), Prenni, J. F. (Author), Long Beach, CA.

June 17, 2013, "Viteri, D.M., Otto, K., Terán, H., Schwartz, H.F., and Singh, S.P. 2013. Role of Sclerotinia sclerotiorum isolate aggressiveness, multiple inoculations and post-inoculation evaluation dates for selecting white mold resistant common bean.", American Phytopathological Society Pacific Division Meeting, June 17-19, Tucson, AZ., American Phytopathological Society, Viteri, D. M. (Presenter), Otto, K. (Author), Teran, H. (Author), Schwartz, H. F. (Author), Singh, S. P. (Author), Tucson, AZ.

2012, "Schwartz, H.F., Schroeder, B.K., VanKirk, J., Douce, G.K., Jibilian, G., Lafferty, J., and Norton, G.W. 2012. Onion ipmPIPE network – interactive resource for onion stakeholders. Proc. National Meeting of the American Phytopathological Society, Providence, RI, August 4-8, 2012. Poster Presentation.", (Presenter).

TEACHING:

<u>Year</u>	<u>Semester</u>	<u>Course No./Title</u>	<u>Cr. Hrs.</u>	<u>Enrollment</u>
2015	Spring	BSPM361 - Elements of Plant Pathology	3	57
2015	Spring	BSPM451 - Integrated Pest Management	3	25
2014	Fall	BSPM799 - Dissertation	18	5
2014	Spring	BSPM799 - Dissertation	18	5
2014	Spring	BSPM698 - Research	18	7
2014	Spring	BSPM798 - Research	18	9
2014	Spring	BSPM699 - Thesis	18	5
2013	Fall	BSPM799 - Dissertation	18	4
2013	Fall	BSPM495 - Independent Study	3	3
2013	Fall	BSPM698 - Research	18	8
2013	Fall	BSPM798 - Research	18	11
2013	Fall	BSPM699 - Thesis	18	4
2013	Spring	BSPM799 - Dissertation	18	6
2013	Spring	BSPM594 - Independent Study	3	1
2013	Spring	BSPM451 - Integrated Pest Management	3	25
2013	Spring	BSPM798 - Research	18	8
2013	Spring	BSPM699 - Thesis	18	6
2012	Fall	BSPM594 - Independent Study	3	1
2012	Fall	BSPM798 - Research	18	10
2012	Fall	BSPM699 - Thesis	18	3
2012	Spring	BSPM799 - Dissertation	18	7
2012	Spring	BSPM798 - Research	18	6
2012	Spring	BSPM699 - Thesis	18	2
2011	Fall	BSPM698 - Research	18	9
2011	Fall	BSPM798 - Research	18	8
2011	Spring	BSPM698 - Research	18	12
2011	Spring	BSPM798 - Research	18	12
2011	Spring	BSPM699 - Thesis	18	4
2010	Fall	BSPM698 - Research	18	18
2010	Fall	BSPM798 - Research	18	12
2010	Fall	BSPM699 - Thesis	18	3
2010	Spring	BSPM698 - Research	18	14
2010	Spring	BSPM798 - Research	18	10
2009	Fall	BSPM698 - Research	18	9
2009	Fall	BSPM798 - Research	18	10

2009	Spring	BSPM798 - Research	18	10
2008	Fall	BSPM698 - Research	18	8
2008	Fall	BSPM798 - Research	18	11
2008	Spring	BSPM798 - Research	18	10

Evidence of Teaching Effectiveness (Annual Input)

Other Evidence

Spring 2015, BSPM 361–Elements of Plant Pathology
Responsible for selected lectures during the semester

Spring 2015, BSPM 451–Integrated Pest Management
Responsible for selected lectures during the semester

EXTENSION/ENGAGEMENT ACTIVITIES/ACCOMPLISHMENTS

Email

disease management and crop production information. Adult, various, various. Number of times program was made: 15000. Total number of participants: 10000. Percent Responsible: 100%. Full Year 2014.

Website Visit

disease management and crop production information. Adult, various. Number of times program was made: 15000. Percent Responsible: 100%. Full Year 2014.

extension activities

Vegetable Pathology Extension. Adult, various, CO. Number of times program was made: 30. Total number of participants: 3000. Percent Responsible: 100%. Full Year 2014.

COMMITTEES

Pest Management Work Team, (January 1, 2003 - June 30, 2015).

Associate Department Head, (January 1, 2002 - June 30, 2015).

Executive Committee, (January 1, 2001 - June 30, 2015).

Vegetable Industries, (January 1, 1995 - June 30, 2015).

Bean Industry Newsletter, (January 1, 1980 - June 30, 2015).

Commodity Groups, (January 1, 1980 - June 30, 2015).

Search Committee - Fungal Pathology Positions, (July 1, 2014 - December 31, 2014).

Search Committee - Dryland Fungal Pathology Position, (August 15, 2013 - May 1, 2014).

Cultivar Release Committee, (January 1, 1985 - June 30, 2015).

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Forestry Images, Bugwood. (January 31, 2015).

Society of Southwestern Entomologists. (January 1, 2010 - December 31, 2015).

Sigma Xi. (January 1, 1981 - December 31, 2015).

Bean Improvement Cooperative. (January 1, 1973 - December 31, 2015).

American Phytopathological Society. (January 1, 1971 - December 31, 2015).

W2008 Multistate Committee - Biology and Management of IYSV and other problems in Onions. (January 1, 2007 - June 30, 2015).

NCERA208 Multistate Committee - Emerging Soybean Rust Threat. (January 1, 2004 - June 30, 2015).

Council for Agricultural Science and Technology. (January 1, 2000 - June 30, 2015).

National Allium Research Conference. (December 1, 1981 - June 30, 2015).

Epsilon Sigma Phi. (January 1, 1981 - June 30, 2015).

W2150 Multistate Committee - Phaseolus Crop Improvement. (January 1, 1981 - June 30, 2015).

Member, Society of Southwestern Entomologists. (January 1, 2007 - December 31, 2015).

Member, Bean Improvement Cooperative. (January 1, 1974 - December 31, 2015).

Member, American Phytopathological Society. (January 1, 1971 - December 31, 2015).

Committee Member, IR-4 Committee, Western Region. (January 1, 2012 - June 30, 2015).

Reviewer, Journal Article, Plant Health Progress. (January 1, 2008 - June 30, 2015).

Member, W2008 Multistate Committee - Biology and Management of IYSV and other problems in Onions. (January 1, 2007 - June 30, 2015).

Member, NCERA208 Multistate Committee - Emerging Soybean Rust Threat. (January 1, 2004 - June 30, 2015).

Member, Council for Agricultural Science and Technology. (January 1, 1990 - June 30, 2015).

Member, Sigma Xi. (January 1, 1985 - June 30, 2015).

Reviewer, Ad Hoc Reviewer, Colorado Dept. of Agriculture, Denver, Colorado. (January 1, 1981 - June 30, 2015).

Member, Epsilon Sigma Phi. (January 1, 1981 - June 30, 2015).

Reviewer, Journal Article, Plant Disease. (January 1, 1981 - June 30, 2015).

Member, W2150 Multistate Committee - Phaseolus Crop Improvement. (January 1, 1981 - June 30, 2015).

National Allium Research Conference, Scottsdale, AZ. (January 1, 2014 - December 31, 2014).

Editor, Book, APS Press Board. (January 1, 2006 - December 31, 2014).

Reviewer, Ad Hoc Reviewer, USDA-ARS Sclerotinia Initiative. (January 1, 2003 - December 31, 2012).

OTHER ACTIVITIES/ACCOMPLISHMENTS – SERVICE/OUTREACH

Committee Member, Registry Ridge Homeowners Association, Fort Collins, Colorado. (January 1, 2007 - Present).
