

NAME: CONRAD K. BONSI
G. W. Carver Agricultural Experiment Station
TUSKEGEE UNIVERSITY, Tuskegee Institute, AL 36088

EDUCATION: Post doc, Pennsylvania State University – Plant Pathology (1982-83); Ph.D., Cornell University – Plant Pathology (1978-1982); MS, Tuskegee University – Plant & Soil Science (1976-78); B. Sc (Hons)., University of Ghana – Crop Protection (1971-75)

EMPLOYMENT: Associate Dean, College of Agriculture, Environment and Nutritional Science (2009-Present) Associate Research Director, G. W. Carver Agricultural Experiment Station (1987-Present) Professor, Department of Agricultural Science, Tuskegee University, Tuskegee, AL (1992-Present); Associate Professor, Department of Agricultural Sciences, Tuskegee University, Tuskegee, AL (1987-92); Assistant Research Director, G. W. Carver Agricultural Experiment Station, Tuskegee University, Tuskegee, AL (1986 – 87); Assistant Professor, Department of Agricultural Sciences, Tuskegee University, Tuskegee, AL (1983-87); Research Associate, Pennsylvania State University, Biglerville, Pennsylvania (1982-83); Research/Teaching Assistant, University of Ghana, Legon (1975-76)

AREAS OF SPECIAL INTEREST:

Plant Disease Management, Plant Breeding and Genetics, Integrated Pest Management, International Agriculture and Development, Small Farm Research, Space Agriculture, Agricultural Research Program Management and Administration. Development of disease and pest resistant cultivars and applications of integrated pest management strategies for the management and control of diseases and pests of crop plants. Development of adaptable small farm production systems through on farm research. Development of crop production systems for space applications.

COURSES TAUGHT / STUDENT ADVISEMENT: Served as Major Advisor for 8 MS thesis students. Has taught graduate and undergraduate courses in Plant Breeding, Vegetable Crops and Soil Microbiology . Currently teaches a graduate courses in Plant Pathology and Integrated Pest management

HONORS: International Society for Tropical Root Crops (ISTRC: Lifetime Achievement Award (2007) The Tuskegee University Sigma Xi Russell W. Brown Distinguished Scientist Research Award (1997); USDA Group Honor Award for Excellence (1996); Certificate of Recognition National Aeronautics and Space Administration (NASA) 1994; Fellow, USDA-ESCAP Leadership Training Program (1992); Tuskegee University Faculty Achievement Award (1992); Tuskegee University Faculty Performance in Research Award (1991); Tuskegee University Inventor Award (1990); Futurist in Science and Technology, Black Enterprise Magazine (1990); University of Ghana Post Graduate Scholarship (1976-1982)

SELECTED GRANTS (Principal Investigator/Co-investigator)

Building Global Competence and Collaborations through Student Experimental Learning and Faculty Exchange in China, Co PI Sub Awardee \$100,000 (of \$250,000Alabama A&M University). USDA/NIFA 2013-2016
Building Global Engagements to Enhance Faculty & Student's Professional Development & Career Opportunities in Agriculture`s Challenge Areas in Brazil. CoPI . Sub Awardee \$100,000 (of \$300,000, Alabama A&M University) USDA/NIFA. 2012-2015
-Modernizing Agricultural Education and Training Systems, Co-Pi, Sub Awardee \$600,000. USAID/VPI&SU, 2012-2017
-Sustainable Technologies for Orange and Purple Sweetpotatoes (STOPS) in Ghana. Co-PI \$250,000.00 USAID/HortCRSP-UCDavis, 2012-2014
-Collaborative Research and Capacity Building of Sokoine University of Agriculture and National Agricultural research System. Co PI Sub Award \$403,577. USAID/Ohio State University 2011-2016
-Strengthening Faculty and Student`s Global Competencies and Experiential Learning in Agriculture, Natural -- Resource Management and Conservation. PI. \$300,000.00.. USDA/NIFA CBG. 2010-2013
-Extension Integrated Pest Management Coordination and Support Program. PI. \$60,000.00. USDA/ NIFA. 2010-2013
-Nutritional and Economic Enhancement of Ghanaian Traditional Diets Using the Orange Flesh Sweetpotato (OFS) Products: Orange-Fleshed Nutri-Business. Co-PI \$150,000.00. UC Davis HORTCRSP/USAID, 2010-2011
-Agricultural Biotechnology: Assessing perceptions of farmers and consumers and providing training workshops for stakeholders in Ghana. PI, \$100,000.00, USDA/FAS, 2007-2011

Integrated Pest Management and Food Safety in Small farm Environment. PI. \$296,400.00. USDA/NIFA. 2007-2011

- Biosafety testing of ‘High Protein’ Sweetpotatoes in Ghana, Co-PI, \$75,000.00. USDA/FAS, 2007-20010
- Soil fertility and water management training for West African scientists. Co-PI. \$40,000.00, USDA/FAS, 2007
- Biosafety training for West African scientists. Co-PI, \$20,000.00, USDA/FAS, 2007
- West African Cotton Improvement Project, \$460,000.00. IFDC/ USAID, 2006-2008
- IPM training for West African Scientists, \$68,000.00, USAID/NCC/USDA, 2006
- Soil Fertility Management Training for West African Scientists, \$30,000.00, USDA/FAS, 2006
- Center for Food and Environmental Systems for Human Exploration of Space, \$4,800,000, NASA, 2003-2007
- Ghana Economic Enhancement Project and Nigeria FtF Program, Winrock International/USAID, \$175,000.00, 2000-2004
- NASA/Tuskegee University Internship Program, NASA/JSC, \$75,000, 2003-2005
- NASA High School Summer Internship Program, \$120,000, 1995-2001
- Biotechnology Workshop in Sub-Saharan Africa: Developing Strategies for increased use of Biotechnology Research for Food Security, \$184,000, USDA/FAS, 2000-
- Strengthening Sanitary/Phyto Sanitary (SPS) Capacity and Infrastructure in Sub-Saharan African through Risk Assessment Training, \$1,000,000, USAID, 2001-2003
- Evaluation of Selected Underutilized African Vegetable Crops by Farmers in Senegal, \$87,000, USAID 1997-98
- Center for Food and Environmental Systems for Human Exploration of Space, \$5,000,000, NASA, 01/97-12/01
- Center for Food Production, Processing and Waste Management for CELSS, \$4,866,000, NASA, 11/91-10/96
- Development of Sweetpotato Growth and Biomass Simulation Model(s), \$225,000, USDA/CSREES, 9/92-8/95
- Use of Organic Nitrogen Sources of Sweetpotatoes: Production Potential and Economic Feasibility, \$120,000, USDA, 10/92-9/94
- Strengthening Instruction in Biotechnology, \$44,042, US Dept. of Education, 9/90-9/92
- Sweetpotato Production in Soilless Culture for CELSS, \$1,000,000, NASA, 10/86-4/92
- International Symposium on Sweetpotato Technology for the 21st Century, \$75,000, USDA, NASA, 9/90-6/91
- Research Facilities Development Program, \$7,500,000, USDA, 10/86-9/93
- Kudzu-Goat Interactions: A Pilot Project, \$30,000, US Forest Service, 9/90-9/92
- A Pilot Small Farm Rehabilitation Project; Alabama, \$585, USDA/FmHA, 9/84-9/86
- Controlling Storage Root Development in Sweetpotato, \$100,000, USAID, 6/89-9/91
- Evaluation of Techniques for Control of Mold on Walla Walla Sweet Onions, \$40,000, Battelle Labs, 6/84-6/85
- Use of Gamma Radiation as a Form of Preservation of Sweetpotatoes; Phase I & II, \$200,0900, Dept. of Energy, 10/85-9/88

PROFESSIONAL ORGANIZATIONS: National Sweetpotato Collaborator Group, Alabama Sweetpotato Growers Association, American Phytopathological Society, American Society for Horticultural Science, Caribbean Food Crop Society, Organization of Tropical American Nematologists, International Society for Tropical Root Crops, International Society for Tropical Root Crops-African Branch, International Society for Horticultural Science, Sigma Xi; Scientific Honor Society, Society of Nematologists

Consulting Work (Selected 2000-Present)

- Dupont Company: West African Agribusiness Fact Finding and Exploratory Mission, July-December, 2006
- Monsanto Company: Biotechnology Training of Burkina Faso Scientists, August –December, 2006
- Council for Scientific and Industrial Research (CSIR), Ghana: Biotechnology Training Program, July 2005- Dec 2006
- USDA/FAS/USAID: Review of Cotton Sector of the C-4West African Countries: September –October 2004
- USDA/FAS: Biotechnology Communication to Stake Holders in Africa: November 2000
- USAID: Sokoine University of Agriculture Capacity Building Program: 1994-2004
- Federal Government of Nigeria: Agricultural Development in Imo and Abia States, June –July 2000
- The Leon Sullivan Foundation: The Sullivan Summit Agriculture Session , 1998-Present

PUBLICATIONS/PATENTS/OTHER SCHOLARSHIP:

Books and Patents:

Hill, W. A., C. K. Bonsi and P. A. Loretan. 1992. Sweetpotato Technology for the 21st Century. Tuskegee University, Tuskegee, AL 607 pp

- Morris, C. E., P. A. Loretan, C. K. Bonsi, W. A. Hill. 1989. Movable root contact/pressure plate assembly for hydroponic systems U.S. Patent and Trade Office, Patent No. 4,860,490.
- Hill, W. A., P. A. Loretan and C. K. Bonsi. 1984. The sweetpotato for space missions. Carver Research Foundation of Tuskegee University, Tuskegee, AL 64 pp.

Selected Refereed Publications:

- Mortley D.G., Jun-Hyun Oh, D.S. Johnson, **C.K. Bonsi**, and W.A. Hill. 2012. Influence of harvest intervals on growth responses and fatty acid content of purslane (*Portulaca oleracea*) HortScience Vol 47(3):437-439.
- Nyiwung, K. Z., D. G. Mortley, A. Issah, **C. K. Bonsi**, W. A. Hill and B.T. Vaughan. 2012. Sweetpotato as potential feedstock for biofuel production. J. Root Crops 36 (2): **(In Press)**.
- Nyiwung, K. Z., D. G. Mortley, M. Egnin, **C. K. Bonsi**, and B.T. Vaughan. 2012. Sweetpotato. In: Handbook of Bioenergy Crop Plants, p733-742. CRC Press Boca Roton, FL
- Mortley, D.G., S. Burrell, C.K. Bonsi, W.A. Hill, and C. E. Morris. 2009. Influence of Daily Light Period and Irradiance on Yield and Leaf Elemental Concentration of Hydroponically Grown Sweetpotato – HortScience 44(5) (In Press)
- Mortley, D.G., C. Bonsi, W. Hill and C. E. Morris. 2009. Daily Light Period Influences Pod Yield, Harvest Index and Flowering of Hydroponically Grown Peanut Plants – Crop Science (In Revision)
- Addo-Bediaku A, T. Bharnu, L. E. N. Jackai and C. K Bonsi, 2007 Assessment of Introduction of *Cylas formicarius elegantulus* (Coleoptera: Bretidae) into Weevil-Free Areas in the Southern United States. J. of Economic Entomology. 100 (2):315-321
- Bonsi C. K, V. A. Khan, P. David, M. N. Alvarez, D. Mortley, W. A. Hill and C. Morris: “Whatley-Loretan Sweetpotato”, HortScience 2006 (Accepted for publication)
- Jackai L.E. N, B. Sosinki, D. M. Jackson, K. A. Sorensen, C. Bonsi, A. Addo-Bediako, R. Ali, B. Tamaru, F. Quarcoo and M. N Alvarez (2006): Occurrence and Intra-specific Variation of Sweetpotato Weevil in Relation to Its potential Spread in Southern USA and the Carribean.; Acta Horticulturae: 703: 197-203
- Mortley D G,C. K. Bonsi, W. A Hill, C.E Morris, 2002. Daily light period influences pod yield, harvest index and grown in NFT. SAE Tech Paper Series, 2002-01-2488
- Mortley, D. G., J. H. Hill, C. K. Bonsi and W. A. Hill. 2001. Nutrient management of sweetpotato grown in nutrient film technique. Acta Hort. 548:567-574.
- Mortley, D. G., J. H. Hill, D. R. Hileman, C. K. Bonsi, and W. A. Hill. 2001. Light and CO2 interaction on peanut grown in film technique. Acta Hort. 543:327-334.
- Mortley, D. G., J. H. Hill, C. K. Bonsi, W. A. Hill and C. E. Morris. 2001. Using mass balance techniques to manage nutrition of hydroponically-grown sweetpotato [*Ipomoea batatas L*] Lam]. SAE Technical Paper Series No. 2001-01-2274, Warrendale, Pennsylvania
- Mortley, D. G., J. H. Hill, C. K. Bonsi, W. A. Hill and C. E. Morris. 2001. Response of peanut (*Arachis hypogae L*) to increasing levels of blue light. SAE Technical Paper Series No. 2001-01-2274, Warrendale, Pennsylvania.
- Mortley, D. G., C. K. Bonsi, P. A. Loretan, W. A. Hill and C. E. Morris. 2000. High relative humidity increases yield, harvest index, flowering and gynophore growth of hydroponically grown peanut plants. HortScience. 36:46-48.
- Mortley, D. G., H. H. A .Aglan, C. K. Bonsi, and W. A. Hill. 2000. Growth of sweetpotato in lunar and mars simulants. SAE Technical Paper Series NO. 2000-01-2289 Warrendale, PA
- Stanciel, K., D. G. Mortley, D. R. Hileman, P. A. Loretan, C. K. Bonsi and W. A. Hill, 2000. Growth, pod, and seed yield, and gas exchange of hydroponically grown peanut in response to CO2 enrichment. HortScience 35:49-52.
- Mortley, D. G., P. A. Loretan, W. A. Hill, C. K. Bonsi, C. E. Morris, R. Hall and D. Sullen, 1998. Biocompatibility of sweetpotato and peanut in a hydroponic system. HortScience 33:1147-1149
- Trotman, A. A., P. P. David, C. K. Bonsi, W. A. Hill and P. A. Loretan. 1998. Comparison of the elemental composition of sweetpotato grown in a bioreactor effluent and modified half Hoagland solution. Tropical Agric. 75:35-38.
- David, P. P., C. K. Bonsi, D. G. Mortley, and A. A. Trotman, 1998. Yield stability differences among sweetpotato genotype under controlled environments. Tropical Agric. 75:204-207.
- Mortley, D. G., P. P. David, C. K. Bonsi, P. A. Loretan and W. A. Hill. 1998. Sweetpotato production using the Nutrient Film Technique. In Proceedings of International Workshop on Sweetpotato Production System toward the 21st Century, Miyazaki, Japan. Pp.215-225.
- Wu, W. H., J. Y. Lu, A. R. Jones, D. G. Mortley, P. A. Loretan, C. K. Bonsi and W. A. Hill. 1997. Proximate composition, amino acid profile, fatty acid composition and mineral content of peanut seeds of hydroponically grown plants at elevated CO2 levels. J. Agric. Food Chemistry 45 (10): 3863-3866

- Mortley, D. G., P. A. Loretan, C. K. Bonsi, W. A. Hill and C. E. Morris. 1996. Growth responses of hydroponically grown sweetpotato tolerant of continuous daily light period. *HortScience* 31:209-212
- David, P. P., C. K. Bonsi, A. A. Trotman, and D. Z. Douglas. 1996. Nutrient management effects on sweetpotato genotypes under controlled environment. *Acta Horticulturae*. 440:65-62.
- Hill, J., D. Douglas, P. P. David, D. G. Mortley, A. A. Trotman and C. K. Bonsi, 1996. Biomass accumulation in hydroponically grown sweetpotato in a controlled environment: A preliminary study. *Acta Horticulturae* 440:25-30
- Mortley, D. G., J. Hill, P. Loretan, C. Bonsi, W. Hill, D. Hileman and A. Terse. 1996. Elevated carbon dioxide influences yield and photosynthetic responses of hydroponically-grown sweetpotato. *Acta Horticulturae* 440:31-36
- David, P. P., A. A. Trotman, D. G. Mortley, C. K. Bonsi, P. A. Loretan and W. A. Hill. 1995. Foliage removal influences sweetpotato biomass in hydroponic culture. *Hortscience* 30(5): 1000-1002
- David, P. P., C. K. Bonsi, O. C. Clarke and D. Z. Douglas. 1994. Screening sweetpotato germplasm for high dry matter. *Proceed. Caribbean Food Crops Society Meeting*. July 31-August 5, 1994. U. S. Virgin Island. Pp 156-159
- Loretan, P. A., C. K. Bonsi, D. G. Mortley, R. M. Wheeler, C. L. Mackowiak, W. A. Hill, C. E. Morris, A. A. Trotman and P. P. David. 1994. Effects of several environmental factors on sweetpotato growth. *Adv. Space Res. Vol. 12, No. 11:277-280.*
- Bonsi, C. K., D. G. Mortley, P. A. Loretan and W. A. Hill. 1994. Temperature and light effects on sweetpotatoes grown hydroponically. *Acta Horticulturae*. 361:527-530
- Mortley, D. G., C. K. Bonsi, P. A. Loretan, W. A. Hill and C. E. Morris. 1994. Relative humidity influences yield, edible biomass and linear growth rate of sweetpotato. *HortScience* 29:609-610
- Mortley, D. G., P. A. Loretan, C. K. Bonsi, W. A. Hill and C. E. Morris. 1994. Frequency of nutrient solution changes affects yield, elemental concentration and water use of sweetpotato grown by use of nutrient film technique. Pp. 122-129. *Proc., Sino-Intl. Colloquium on Soilless Culture, Hangzhou, China, May 22-24. 1994.*
- Rhoden, E. G., J. R. Bartlett and C. K. Bonsi. 1994. Use and value of poultry waste in agricultural production. *Proceed. Jamaican Society for Agricultural Sciences*. pp 21-22.
- Williams, C. S., A. K. Brown, O. Nchege, P. A. Loretan, C. K. Bonsi and R. A. Chung. 1993. Irradiation of sweetpotato: ultrastructure and starch. *Food Structure, Vol. 13:1046*
- David, P. P., C. K. Bonsi, E. G. Rhoden and V. A. Khan. 1993. An economic evaluation of alley cropping grapes with selected vegetable crops. *J. Small fruit and Vitic.*, 1:37-47.
- Mortley, D. G., C. K. Bonsi, W. A. Hill, P. A. Loretan and C. E. Morris. 1993. Irradiance and nitrogen to potassium ratio influences sweetpotato yield in nutrient film technique. *Crop Sci.* 33:782-784.
- Grant, P. J., J. Y. Lu, D. G. Mortley, P. A. Loretan, C. K. Bonsi and W. A. Hill. 1993. Nutritive composition of hydroponically grown sweetpotato storage roots as affected by frequency of nutrient solution change. *HortScience* 28(8): 802-804.
- Hill, W. A., C. K. Bonsi and P. A. Loretan. 1992. *Sweetpotato Technology for the 21st Century*. Tuskegee University, Tuskegee, AL 607 pp.
- Bonsi, C. K., P. A. Loretan, W. A. Hill and D. G. Mortley. 1992. Response of Sweetpotatoes to Continuous Light. *HortScience* 27(5):271-272.
- Bonsi, C. K., P. J. C. Bouwkamp, W. A. Hill and P. A. Loretan. 1992. Production Practices. In: A. Jones and J. C. Bouwkamp (Eds.) *Fifty Years of Cooperative Sweetpotato Research 1939-1989*. Southern Coop. Series. Bull. No. 369 pp. 22-41
- Hill, W. A., D. G. Mortley, C. L. MacKowiak, P. A. Loretan, T. W. Tibbitts, R. M. Wheeler, C. K. Bonsi and C. E. Morris. 1992. Growing root, tuber and nut crops hydroponically for CELSS. *Adv. Space Res.* 12(5):125-131.
- Bonsi, C. K., J. C. Bouwkamp, W. A. Hill and P. A. Loretan. 1992. Production practices. In: *Fifty Years of Cooperative Sweetpotato Research. 1939-1989*. Southern Cooperative Series Bull. Pp. 29-43
- Hall, M., D. LaBonte and C. Bonsi. 1992. New technologies and conventional breeding of sweetpotatoes. In: W. A. Hill, C. K. Bonsi and P. A. Loretan. (eds.) *Sweetpotato Technology for the 21st Century*. Pp. 477-483
- Bonsi, C. K., W. A. Hill, D. G. Mortley, P. A. Loretan, C. M. Morris and E. Carlise. 1992. Growing sweetpotatoes for space missions using NFT. In: W. A. Hill, C. K. Bonsi and P. A. Loretan. (eds.) *Sweetpotato Technology for the 21st Century*. Tuskegee University, Tuskegee, AL Pp. 110-119.
- Hill, W. A., D. G. Mortley, C. L. MacKowiak, P. A. Loretan, T. W. Tibbitts, R. M. Wheeler, C. K. Bonsi and C. E. Morris. 1992. Growing root, tuber and nut crops hydroponically for CELSS. *Adv. Space Research* 12(5): 125-131.
- Mortley, D. G., P. A. Loretan, C. K. Bonsi, W. A. Hill and C. E. Morris. 1991. Plant spacing influences yield and linear growth rate of sweetpotatoes grown hydroponically. *HortScience* 26:1272-1275.
- Bonsi, C. K., P. A. Loretan, D. G. Mortley, W. A. Hill, C. Ogbuehi, E. Martinez and C. E. Morris. 1991. Assessment of temperature and light effects on growth of sweetpotato using nutrient film technique (NFT). *Fourth Triennial*

- Symposium, International Society for Tropical Root and Tuber Crops – African branch, 2-8 Dec. 1982. Kinshasa, Zaire, Pp. 337-339.
- Loretan, P. A., C. K. Bonsi, D. G. Mortley, C. R. Ogbuehi, W. A. Hill and C. E. Morris. 1991. Effects of periodic harvesting of storage roots and shoot tips on growth and yield of sweetpotatoes grown hydroponically. Fourth Triennial Symposium. International Society for Tropical Root and Tuber Crops – African branch, 2-8 Dec. 1982. Kinshasa, Zaire. 321-344 pp.
- Mortley, D. G., V. A. Khan and C. K. Bonsi. 1991. Effects of fertilizer placement under plastic on yield of transplanted tomatoes. *Proc. Amer. Soc. For Plasticulture*. 23:199-203
- Mortley, D. G., C. K. Bonsi, P. A. Loretan, C. E. Morris, W. A. Hill and C. Ogbuehi. 1991. Evaluation of sweetpotato genotypes for adaptability to hydroponic systems. *Crop Sci*. 31:845-847
- Bonsi, C. K., P. A. Loretan, W. A. Hill, C. R. Ogbuehi and C. E. Morris. 1990. Effects of photoperiod and light intensity on growth and storage root production of sweetpotatoes, p. 515-519. Proceedings, 8th Symposium of the International Society of Tropical Root Crops. Oct. 30-Nov. 5, 1988. Bangkok, Thailand.
- Hill, W. A., C. K. Bonsi, P. A. Loretan, C. E. Morris, R. D. Pace and J. Y. Lu. 1990. Sweetpotatoes for space missions: a new approach for marketing. Pp. 609-614. Proceedings, 8th Tropical Symposium of the International Society for Tropical Root Crops. October 30-Nov. 5, 1988, Bangkok, Thailand
- Hill, W. A., P. A. Loretan, C. K. Bonsi, D. G. Mortley, C. E. Morris, J. Y. Lu, R. D. Pace, C. Ogbuehi, P. K. Biswas, J. H. Hill, E. Martinez, E. Carlisle S. Adeyeye and D. Green. 1990. Space Agriculture: The work of Carver continues. In: *Americans in Agriculture: Portraits of Diversity*. 1990 Yearbook of Agriculture. Pp. 108-110.
- Khan, V. A., C. Stevens, and C. K. Bonsi, 1990. Enterprise budget analysis for watermelon, okra and tomato grown under VisPore row cover and polyethylene mulches: Proceedings: *National Agri. Plastic* 22:66-71.
- Khan, V. A., C. Stevens, C. K. Bonsi and A. V. Tang. 1989. Evaluation of Vispore row cover polyethylene mulch for early tomato production in Alabama. *Proc. Nat. Agri. Plastic*. 21:80-82
- Stevens, C., V. A. Khan, A. Y. Tang and C. K. Bonsi. 1989. The effect of preplant clear plastic mulch on root knot damage of sweetpotatoes. *Proc. Nat. Agri. Plast*. 21:200-205.
- Morris, C. E., P. A. Loretan, C. K. Bonsi, W. A. Hill. 1989. Movable root contact/pressure plate assembly for hydroponic systems U. S. Patent and Trade Office, Patent No. 4,860,490.
- Loretan, P. A., C. K. Bonsi, W. A. Hill, C. R. Ogbuehi, D. G. Mortley, J. Y. Lu, C. E. Morris and R. D. Pace. 1989. Sweetpotato growth parameters, yield components and nutritive value of CELSS applications. *J. Aerospace* 98:1090-1094.
- Hill, W. A., P. A. Loretan, C. K. Bonsi, C. E. Morris, J. Y. Lu and C. R. A. Ogbuehi. 1989. Utilization of sweetpotatoes in controlled ecological life support systems. *Advances in Space Research – 9(8):2941*.
- Loretan, P. A., C. K. Bonsi, W. A. Hill, C. R. Ogbuehi, D. G. Mortley, J. Y. Lu, C. E. Morris and R. D. Pace. 1989. Sweetpotato growth parameters, yield components and nutritive value for CELSS applications. Society of Automotive Engineers, SAE Technical Paper Series 891571:1-5
- Loretan, P. A., C. E. Morris, C. K. Bonsi, W. A. Hill, R. D. Pace and J. Y. Lu. 1989. Sweetpotato production in hydroponic systems. Proceedings, ISOSC, Flevohof, Netherlands. Pp. 275.
- Pace, R. D., G. G. Dull, B. R. Phillips, C. K. Bonsi and I. T. Forrester. 1988. The effect of topping frequency on nutrient content of sweetpotato green tips. *J. Food Composition and Analysis*. 9(4):326-333.
- Hill, W. A., and C. K. Bonsi. 1987. Root Crop Breeding. In: *Congress, Office of Technology Assessment, Enhancing Agriculture in Africa: A Role for U. S. Development Assistance (Volume 2, Part D)*, National Technical Information Service, Springfield, VA
- Hill, W. A., P. A. Loretan, C. K. Bonsi, C. E. Morris, R. D. Pace and J. Y. Lu. 1987. Production potential of sweetpotatoes in hydroponic systems. Proc. 2nd Caribbean Workshop on Tropical Root Crops, St. Vincent and the Grenadines, West Indies, 14-18 September 1987. University of the West Indies, Trinidad and Tobago.
- Pace, R. D., C. K. Bonsi, B. R. Phillips and I. T. Forrester. 1987. Iron content and iron availability in sweetpotato tips collected at different times during season. *Nutr. Rep. Int.* 36(6):1151-1156
- Bonsi, C. K., E. G. Rhoden, C. Stevens and V. A. Khan. 1986. evaluation of tomato breeding lines for resistance to *Sclerotium rolfsii* and control of southern blight vegetables. *Proceedings of Caribbean Food Crop Soc.* 22:223-229
- Bonsi, C. K. and B. R. Phillips. 1986. Yam. In: *World Book Encyclopedia*, Vol. 88A
- Bonsi, C. K. and B. R. Phillips. 1986. Sweetpotato. In: *World Book Encyclopedia*, 88A.
- Hill, W. A., P. A. Loretan and C. K. Bonsi. 1984. The sweetpotato for space missions. Carver Research Foundation of Tuskegee University, Tuskegee, AL 64 pp.
- Bonsi, C. K., and B. R. Phillips. 1984. Breeding and selection of sweetpotatoes. In: Hill, W. A., P. A. Loretan and C. K. Bonsi (eds). *The sweetpotato for space missions*. Carver Research Foundation of Tuskegee University, Tuskegee, AL. Pp. 25-29.

- Bonsi, C. K., and B. R. Phills. 1979. Reaction to twelve sweetpotato cultivars and breeding lines to two root-knot nematode species with three experimental methods. *HortScience* 12(2):539-541.
- Lampthey, P. N. L. and C. K. Bonsi. 1977. The effects of pepper veinal mosaic virus in relation to time of inoculation on the symptom expression, flower initiation and yield of pepper (*Capsicum frutescens* L) *ACTA Horticulture* 53:227-231.

Abstracts Published in Refereed Journals

- Bediaka, N., V. A. Khan, C. K. Bonsi, C. Stevens, E. G. Rhoden, D. Mortley and R. Ankumah. 1992. Patterns of storage and fibrous root development in several sweetpotato cultivars and their progenies. (Abstr) *HortScience* 27(11):1172
- David, P. P., A. Almazan, C. K. Bonsi, D. G. Mortley and A. A. Trotman. 1992. Effects of biweekly topping on nutrient content of shoot-tips and storage root yield of sweetpotatoes grown in NFT System. (Abstr.) *HortScience* 27(11):1170.
- Mortley, D., G. , P. A. Loretan, C. K. Bonsi, W. A. Hill, C. E. Morris. 1991. Sweetpotato growth in response to relative humidity (Abstr.) *HortScience* 26:489-490.
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Non Refereed Publications

- Ogbuehi, C. R., P. A. Loretan, C. K. Bonsi, W. A. Hill, C. E. Morris, P. K. Biswas and D. G. Mortley. 1989. Effect of biweekly shoot tip harvests on the growth and yield of Georgia Jet sweetpotato grown hydroponically, NASA-HBCU Space Science and Engineering Research Forum Proceedings, 22-23 March 1989, Alabama A & M University, Huntsville, AL. Pp. 9-14.
- Morris, C. E., E. Martinez, C. K. Bonsi, D. G. Mortley, W. A. Hill, C. R. Ogbuehi and P. A. Loretan. 1989. Effect of channel size on sweetpotato storage root enlargement in the Tuskegee University hydroponic system. NASA-HBCU Space Science and Engineering Research Forum Proceedings, 22-23 March 1989, Alabama A & M University, Huntsville, AL. Pp. 15-19.
- Rhoden, E. G., and C. K. Bonsi. 1988. Rate and length of seed fill in cowpeas. *Ala. Agri.* 3(1): 14-15.
- Bonsi, C. K., P. A. Loretan and E. G. Rhoden. 1987. Storage root development in sweetpotatoes irradiated with gamma radiation. *ARD Research Symposium Abstract* 7:30.
- Rhoden, E. G., C. K. Bonsi, and V. A. Khan. 1987. Row spacing of southern peas. *ARD Research Symposium Abstract* 7:29-30.
- Bonsi, C. K., P. A. Loretan, W. A. Hill and C. E. Morris. 1987. Growth of sweetpotatoes under continuous light. NASA-HBCU Forum '87, October 26-27, Atlanta University, Atlanta, GA.
- Hill, W. A., P. A. Loretan, C. K. Bonsi, C. E. Morris, R. D. Pace, J. Y. Lu and P. K. Biswas, Sweetpotato production in soilless culture for Controlled Ecological Life Support Systems. NASA-HBCU Forum '87, October 26-27, Atlanta University, Atlanta, GA.
- Loretan, P. A., W. A. Hill, C. K. Bonsi, C. E. Morris, R. D. Pace and J. Y. Lu. 1987. Growth of sweetpotatoes for Controlled Ecological Life Support Systems (CELSS). American Society for Gravitational and Space Biology Conference, October 19-21, Utah State University, Logan, UT.
- Lu, J. Y., R. D. Pace, C. K. Bonsi, P. A. Loretan and W. A. Hill. 1987. Sweetpotato protein: Characterization and utilization. NASA HBCU Forum '87, October 26-27, Atlanta University, Atlanta, GA.
- Pace, R. D., C. K. Bonsi, J. Y. Lu, P. A. Loretan, W. A. Hill and C. E. Morris. 1987. Nutritional analysis of sweetpotato green tips and roots for different harvest dates. NASA-HBCU Forum '87, October 26-27, Atlanta University, Atlanta, GA.
- Pace, R. D., C. K. Bonsi, J. Y. Lu, P. A. Loretan, W. A. Hill and C. E. Morris. 1987. Effect of plant age on nutrient content of green tips and roots of sweetpotatoes grown in sand culture. *ARD, Seventh Biennial Research Symposium*, October 4-7, Omni-Shoreham Hotel, Washington, D. C., p. 18.
- Morris, C. E., P. A. Loretan, W. A. Hill and C. K. Bonsi. 1987. Experimental hydroponic system for growing sweetpotato plants. NASA-HBCU Forum '87.

- Bonsi, C. K., P. A. Loretan, E. G. Rhoden and P. W. David. 1987. Effect of gamma radiation on sprouting and storage root development in sweetpotatoes. Proc., Second Caribbean Regional Workshop on Tropical Crops, St. Vincent and Grenadines, West Indies. Sept. 14-19, 1987. University of the West Indies, Trinidad and Tobago.
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- Lamprey, R., and C. K. Bonsi. 1975. Effect of pepper vein mosaic virus on symptom expression, floral initiation and yield of pepper with respect to time of inoculation. Ghana Sc, Abstr. 1(4):30. (Paper presented at 2nd Africa Symposium on Horticultural Crops, UST Kumasi, 11-16 August, 1975).

PROFESSIONAL CONTRIBUTIONS

- Chair, L. M. Ware Distinguished Teacher Award Committee, 1996 ASHS-SR
- Chairperson, National Sweetpotato Collaborators Group, 1995
- Secretary/Treasurer, International Society for Tropical Root Crops, 1994-1997
- Chair Elect, National Sweetpotato Collaborators Group, 1994.
- Chairperson, 1994 Association of Research Directors (ARD) Symposium
- L. M. Ware Distinguished Teacher Award, Committee Member, American Society for Horticultural Science, Southern Region 1993-Present
- Co-Director and Principal Investigator, Tuskegee University/National Aeronautics and Space Administration Center for Controlled Environmental Life Support Systems, 1987-1997
- Developed and patented a hydroponic system for growing sweetpotatoes for long-term manned spaced missions, 1985-1989.
- National Fellow, Experiment Station Committee on Organization and Policy Leadership Development Program, 1991-1992.
- National Sweetpotato Advisory Committee, Formulates National Sweetpotato Research Priorities, 1991-present.
- USDA/CSRS Research Program Review Committee. Provided recommendations to USDA/CSRS and Southern University on research programs at Southern University, Louisiana. 1991
- Consultant, University of Maryland-Eastern Shore/USAID Project on the Development of Disease Resistance Cocoyam Cultivars for the Republic of Cameroon, 1991.
- Program Chairman, International Symposium on Sweetpotato Technology for the 21st Century, 1991.
- Judge, the Southern Region Agronomy Society of America Student Competitive Paper Session, 1992.
- Served on U. S. Congress Technical Assessment Committee to develop a position paper on the Role of U. S. Technical Assistance on the Development of Tropical Root Crops in Sub-Saharan Africa, 1987.

- External Examiner for Ph.D. Candidates in Crop Science in the Agronomy Department, Faculty of Agriculture, Anamalai University, India, 1991-present.
- Steering Committee, Sokoine University (Tanzania)/Tuskegee University Linkage Project, 1990-present.
- Provided leadership in the development of a State wide and Southern regional goat-forestry project involving research and extension personnel from six 1890 institutions – USDA Forest Service and Soil Conservation Service, 1990-present.
- Alabama Sweetpotato Growers Association, Technical Committee that advises growers on sweetpotato production in Alabama, 1985-1989.
- Provides leadership for the Tuskegee University Sweetpotato Research Program including breeding, molecular genetics, sustainable systems, space agriculture, international agriculture, food technology, human nutrition and outreach, 1987-present.
- Co-established Tuskegee Horizons Magazine/Journal of Food, Agriculture, Environment and People, 1990.
- Outstanding Faculty Research Award, School of Agriculture and Home Economics, Tuskegee University.
- Co-recipient of a patent for growing root crops in hydroponic systems, 1989.
- Recipient of Tuskegee University Inventor Award, 1990, for the first patent at Tuskegee University since those developed by Dr. George Washington Carver.
- Featured as Futurist in Science and Technology, Black Enterprise Magazine, 1990.
- Steering Committee, Association of Research Directors Biennial Research Symposium, 1992.
- Chairman, Association of Research Directors Biennial Research Symposium, Scientist Competitive Session, 1989.

SERVICE TO THE UNIVERSITY

- Provided leadership in the renovation of the plant and animal sciences and foods and nutrition research facilities (\$7.5 million, 1987-1992) and Cooperative Extension Facilities (\$3.5 million, 1987-1992; \$2.2 million, 1992-1997).
- Co-leader, Strategic Planning Committee that saved Tuskegee University over \$2 million in renovation costs for the Campbell Building (Farm Mechanization Building) and Milbank Hall through effective planning and negotiation with USDA.
- Provided leadership for the development of state-of-the art greenhouse and growth chamber facilities at Tuskegee University (1985-1991) that provided the infrastructure base for a \$4.3 million grant from NASA.
- Chairperson, Tuskegee University/USDA Apprenticeship Program that has provided research experience for pre-college students in the food and agricultural sciences, summers 1986-present.
- Associate Director USDA-CSRS/Evans-Allen Research Program and the George Washington Carver Agricultural Experiment Station. Coordinates all research projects involving faculty, staff and students. Provides leadership in the day-to-day management of the Experiment Station.
- Provided leadership for annual field days at the Experiment Station
- Served as faculty advisor to the G. W. Carver Plant and Soil Science Club, 1984-1987
- Provided leadership in conceptualizing, staffing and equipping the Tuskegee University Water Quality Testing and Outreach Program that analyses water samples from throughout Alabama for nitrates and pesticides, 1989-1992.
- Provided leadership in conceptualizing, staffing and equipping the Tuskegee University Sweetpotato Biotechnology Laboratory, 1989-1992.
- Provided leadership in the remodeling of the Tuskegee University George Washington Carver Agricultural Experiment Station, 1985-1989.
- Tuskegee University Faculty Senate Outstanding Research and Service Award Committee member, 1992.
- Chairperson, Research Review Committee, *Tuskegee Horizons*, Journal/Magazine, 1990-present.
- Co-Chairperson, the First Intellectual Property Symposium at Tuskegee University, 1990.
- Served as Major Professor and on the Advisory Committee of over 30 graduate students

SERVICE TO THE COMMUNITY

- People's Action for Community Enrichment (PACE) 1998- Present
- Alabama Food Bank, Auburn Branch 2005- Present
- First Presbyterian Church, Outreach Committee
- Faculty Advisor and Host to Foreign Students and Visiting Scholars
- International Symposium on Sweetpotato for the 21st Century, Program Chair, 1991
- Association of 1890 Research Directors (ARD), Treasurer 2006- Present
- Provides Leadership for International Projects in CAENS
- Leon Sullivan Summit (African- African American Summit) Agriculture Session Committee Chair, 1998-Present

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