

Name: Desmond G. Mortley

Department: Agricultural and Environmental Sciences

Specialty: Production Horticulture/Plant Nutrition

Telephone: (334) 727-8404

Position: Research Professor and Plant & Soil Sciences Coordinator, Department of Agricultural and Environmental Sciences

Education: BS (Hons; Animal Science), Tuskegee University

MS (Plant and Soil Sciences), Tuskegee University

Ph.D., Horticulture (Plant Nutrition/Physiology), The Pennsylvania State University

Research Interests: Controlled Environment (greenhouse/ plant growth chambers), Soilless Agriculture (hydroponics, aeroponics, solution culture; evaluating nutritional and physiological responses of plants to several environmental factors including carbon dioxide optimal or superoptimal, temperature, light intensity, quality, photoperiod) Functional Genomics (especially genes controlling sweetpotato storage root initiation and development particularly in soilless culture); Sustainable 5ss cultures

Professional Experience

January, 2000 Present

Research Professor and Plant Sciences Coordinator, Department of Agricultural and Environmental Sciences

August, 2000 to June, 2009

Research Professor and Coordinator, Center for Food and Environmental Systems for Human Exploration of Space

July, 1996 to August, 2000

Research Associate Professor and Coordinator, Center for Food and Environmental Systems for Human Exploration of Space (similar responsibilities as below)

Taught

Publications

Abstracts

Mortley, D.G. and W.A. Hill. 1985. Nitrogen use efficiency and associative N₂-fixation of sweetpotato genotypes. HortScience 20:665.

Hopkinson, R., D.G. Mortley and W.A. Hill. 1985 Enterobacteriaceae associated with sweetpotato roots. HortScience 20:666.

Bonsi, C.K., P. Loretan, W. Hill, C. Ogbuehi and D. Mortley. 1989. Effects of light intensity on growth and storage root production of sweetpotatoes. HortScience 24:760.

Mortley, D., C. Bonsi, P. Loretan, W. Hill and C. Ogbuehi. 1989. Effects of twophotoperiod and temperature regimes on growth and storage root yield of sweetpotatoes HortScience 24:760.

Mortley, D., C. Bonsi, P. Loretan, C. Morris, W. Hill and C. Ogbuehi. 1989. Preliminary screening of sweetpotato cultivars for adaptability to hydroponic systems HortScience 24:760.

Mortley, D., V. Khan, C. Bonsi, and E. Rhoden. 1990. Influence of fertilizer placement under plastic on yield and nutrient uptake of transplanted tomatoes. HortScience 25:857.

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Morris, C., D. Mortley, P. Loretan, C. Bonsi and W. Hill. 1990. Effect of channel depth on yield of sweetpotatoes grown hydroponically. HortScience 25:856.

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Mortley, D.G., C.K. Bonsi, W.A. Hill, P.A. Loretan, C.E. Morris, A.A. Trotman, and P.P. David. 1992. Response of sweetpotato grown in NFT09(in2ETc0{iff(c)4(e)9(re)3(nt)-329(photoper)

Trotman, A.A., D.G. Mortley, and P.P. David. 1992. Effect of inoculation with *Azospirillum brasilense* on foliage and storage root yield of sweetpotato grown hydroponically in an NFT system. HortScience 27:1170.

Sherif, M. A., P.A Loretan, A.A. Trotman, D.G. Mortley, J.Y. Lu, and L.C. Garner. 1993. Growth of sweetpotato in hydroponic system using split-root channels. HortScience 28:266.

Trotman, A.A., W.A. Hill, D.G. Mortley, P.P. David, and P.A.Loretan. 1993. Response of hydroponically grown sweetpotato to inoculation with *Azospirillum*. HortScience 28:266.

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Garner, L., D. Mortley, P. Loretan, A. Trotman, and P. David. 1993. Sweetpotato growth and yield in NFT as affected by type of cutting and planting depth. HortScience 28:267.

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- J.H. Hill, D.G. Mortley, C.K. Bonsi, and W.A. Hill. 1999. Nutrient management of sweetpotato grown in nutrient film technique. Proc. International Symposium on Growing Media and Hydroponics, pp 89.
- Mortley, D. G., J.H. Hill, C.K. Bonsi, A.A. Trotman, and W.A. Hill. 1999. Response of sweetpotato grown in nutrient film technique (NFT) to blue light. The 35th Annual Meeting, Caribbean Food Crops Society, St. Lucia, July 25-31, 1999.
- Mortley, D.G., D.R. Hileman, J.H. Hill, C.K. Bonsi, and W.A. Hill. 1999. Light and CO₂- interaction on peanut grown in nutrient film technique. Proc. International Symposium on Growing Media and Hydroponics, pp 42.
- Gamble, S.D., D.G. Mortley, C.E. Morris, C.S. Williams, J.W. Williams, C.F. Davis and P.A. Loretan. 1999. Effect of clinorotation on sweetpotato stem cuttings. ASGSB Bull .13:68.
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- Anfield, J., D.G. Mortley and D. Hileman. 2000. Photosynthetic responses to elevated CO₂ and relative humidity in peanut grown in NFT. Proc. NANURC Student Conference, p. 33.
- Barta, D.J., K. Henderson, D.G. Mortley and D.L. Henninger. 2000. Gas exchange, transpiration and yield of sweetpotato grown in controlled environment. Habitation 7:46.
- Gamble, S.D., D.G. Mortley, C.S. Williams, J.W. Williams, C.F. Davis. 2000. Clinorotation influences root growth and ultrastructures of sweetpotato stem cuttings. ASGSB Bull .13:71.
- Mortley, D.G., H.A. Aglan, C.K. Bonsi, W.A. Hill and C.E. Morris. 2000. Growth of sweetpotato in lunar and mars stimulants. Proc. 30th Intl. Conf. Environ. Systems, p 485.
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37. Mortley, D., 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 Hort.*40:31-36.
38. Hill, J., D. Douglas, P. David, D. Mortley, A. Trotman and C. Bonsi. 1996. Biomass accumulation in hydroponically grown sweetpotato in a controlled environment: A preliminary study. *Acta Hort.* 40:25-30.
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40. 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.
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44. Davis, D., N. Dogan, H. Aglan, D. Mortley

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