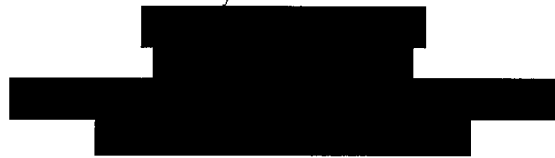


CURRICULUM VITAE OF DR. BRUCE W. MATHEWS

College of Agriculture, Forestry, and Natural Resource Management (CAFNRM)  
University of Hawai'i at Hilo



AREAS OF RESEARCH

Plant nutrient cycling and soil fertility as affected by environmental conditions and crop management. Assess the impact of agricultural and forestry production practices on soil carbon sequestration, coastal wetlands, and potential nutrient losses to surface waters. Develop environmentally sound and economically viable nutrient management practices for pastures, forests, and field crops in the tropics.

EDUCATION

- Ph.D. Agronomy & Soils, *Minor*: Animal Science, University of Florida, [REDACTED] Dissertation: Impact of Grazing Management on Plant-Animal-Soil and Water Quality Responses on a High Water-Table Bermudagrass Pasture. 165 pp.
- M.S. Agronomy, Louisiana State University, [REDACTED] Thesis: Reduction of Subsoil Aluminum Toxicity to Alfalfa by Leaching of Surface-Applied Amendments. 102 pp.
- B.S. Agriculture with High Honors, University of Hawai'i at Hilo, [REDACTED]

PROFESSIONAL EXPERIENCE

- 2016- Dean & UH Hilo Research Office Coordinator (since Oct 21<sup>st</sup>, 2016).
- 2014-16 Interim Dean & Acting UH Hilo Research Office Coordinator (since Jan 1<sup>st</sup>, 2014).
- 2012-13 Interim Dean (since July 1<sup>st</sup>, 2012), CAFNRM, University of Hawai'i at Hilo.
- 2012 Acting Dean (January 1<sup>st</sup> to June 30<sup>th</sup>), CAFNRM, University of Hawai'i at Hilo.
- 2004-11 Professor, Soil Science & Agronomy, University of Hawai'i at Hilo.
- 1999-04 Associate Professor, Soil Science & Agronomy, University of Hawai'i at Hilo.
- 1995-99 Assistant Professor, Soil Science & Agronomy, University of Hawai'i at Hilo.
- 1993-95 Temporary Assistant Professor, Soil Science & Agronomy, University of Hawai'i at Hilo.
- 1989-93 Research Assistant, Agronomy Department, University of Florida.
- 1988-89 Research Aide, Southlands Experiment Forest, International Paper, Bainbridge, Georgia.
- 1986-88 Research Assistant, Agronomy Department, Louisiana State University.

FACULTY LEADERSHIP POSITIONS

- 2011 Faculty Congress Chair, Univ. of Hawaii at Hilo

2003-2009, 2011 Senate Chair, CAFNRM, Univ. of Hawaii at Hilo  
1999- Chaired several faculty, staff, and administrative searches, and personnel review committees.

## **HONORS**

Crop Science Society of America and American Society of Agronomy Service Award for Work as Associate Editor of Forage & Grazing Lands; UH Merit Award; Outstanding Faculty of the Year Award, CAFNRM, University of Hawai'i at Hilo; American Forage & Grassland Council's Outstanding Young Scientist Award; Gamma Sigma Delta; Phi Kappa Phi; Gerald O. Mott Meritorious Graduate Student Award, Department of Agronomy, University of Florida

## **PROFESSIONAL ORGANIZATION MEMBERSHIP**

American Society of Agronomy  
Soil Science Society of America

## **INTERNATIONAL EXPERIENCE – PHILIPPINES AND INDONESIA**

Traveled to the Philippines during summer 1996, spring 2002, summer 2005, spring 2012, winter 2016.. During the 1996 and 2012 trips I studied potential exchanges and linkages between the University of Hawai'i at Hilo (UHH) and several universities in the Visayas and Mindanao. High value tropical hardwood germplasm was also collected in 1996 and 2002 for the UHH Tropical Forestry Research and Demonstration Project along with resource material on sustainable agricultural and multi-species forestry development. Assistance was provided in 1996 to Central Mindanao University on soil testing procedures and information on dwarf elephantgrass and perennial peanut pastures was delivered to the Dairy Training Research Institute at the University of Philippines, Los Baños. During spring 2002 I interacted with agronomists at the International Rice Research Institute, Visayas State University, Silliman University, Xavier University, and other institutions while on sabbatical. I also visited with researchers at the Asian Development Bank, was a technical expertise delegate to the 4<sup>th</sup> Mindanao Food Congress, and attended the Federation of Cattle Raisers Association of the Philippines (FCRAP) - National Beef Congress. During summer 2005 my wife and I lead a three-week long rural aid mission to the islands of Negros and Mindanao that was sponsored by churches in California and Hawaii. In addition to exploring potential academic exchanges the 2012 trip was primarily to represent UHH on the Mayor of Hawaii County's Agricultural and Energy Delegation to Ormoc City as part of a sister city agreement signing. During winter 2016 I presented talks and short seminars on sustainable soil phosphorus management in tropical cropping systems at Bogor Agricultural University and Andalas State University in Indonesia and Aklan State University in the Philippines as part of the 3<sup>rd</sup> International Seminar in Science – Sciences in Precision and Sustainable Tropical Agriculture.

## **CONSULTATION AND ADVISORY BOARDS (Partial List)**

DLIR Hawaii Agriculture Workforce Advisory Board (2014-2018)  
Taste of the Hawaiian Range (2012-2016)  
Mauna Kea Plantation Estates (2014)  
Hawai'i Homegrown Food Network (2009-2012)  
Y H International - Fertilizer & Soil Amendments (2007-2008)  
Scientia Agricola (Brazil) (appointed Associate Editor 2011-2012)

Forage and Grazing Lands (Associate Editor appointed by the Am. Soc. of Agronomy, 2005-2010)  
 Hawaii Land Grant Mission Review Group (2004-2005)  
 USDA-APHIS Independent Panel on Kikuyu Grass (Chair, 2003)  
 Dole Foods - Operations, La Ceiba, Honduras (2001)  
 Agrinom, Hakalau, HI (2001)  
 Gametec, Prescott, WI (1999)  
 Univ. of Hawaii at Hilo Alumni Assoc. (Board of Directors, 1995-2000; President, 1997-1998)  
 Tropical Hawaiian Products - Papaya Division, Keeau, HI (1997)  
 MOA International, Honolulu, HI (1996-1999)  
 Hilo Coast Agricultural Services, Hakalau, HI (1996-1999)  
 Wainani Farm Corporation, Pepeekeo, HI (1996-1998)  
 Ellarina Buena Vista Mangoes, Bukidnon, Philippines (1996-1998)  
 Hakalau National Wildlife Refuge-U.S. Fish & Wildlife Service (1997)  
 USDA National Consultation on Food Security (1997 participant)  
 Hamakua Timber, Ookala, HI (1996-1997)  
 Hawaii Center for Agricultural and Rural Development (1996)  
 Botanical Products International Inc., Hakalau, HI (1995-1996)

### **ACADEMIC ADVISING**

Advised approximately 20 undergraduate students per year at the University of Hawai'i at Hilo for the undergraduate specialization in Tropical Plant Science & Agroecology, formerly Agroecology & Environmental Quality. Served on five MS thesis committees.

### **COURSES TAUGHT AT THE UNIVERSITY OF HAWAI'I AT HILO**

Agronomic Crop Production in the Tropics, Biointensive Farming, Forest Soils, Forestry and Natural Resources, Soil Conservation & Environmental Quality, Environmental Issues in Asia-Pacific, Aquatic Pollution, Soil Fertility & Nutrient Cycling, Soil-Plant-Herbivore Interrelations, Sustainable Agriculture, Tropical Soils, Tropical Silviculture, Water Quality and Aquatic Productivity, and Horse and Cattle Handling.

### **EXTRAMURAL SUPPORT**

Received approximately \$3,000,000 in support as a Principal Investigator or Co-Investigator (list available upon request). Funding agencies include the National Science Foundation, County of Hawai'i, Hawai'i Department of Land & Natural Resources, Hawai'i Forest Industry Association, University of Hawai'i, Department of Energy via Duke University, HNEI, and the USDA. Also obtained approximately \$20,000 of laboratory equipment from C. Brewer Environmental Laboratories, a \$275,000 donation from the W.T. Yoshimoto Trust, a \$320,000 donation from the Natsuyama-Otsubo Family Initiative, a \$200,000 donation from the G.W. and D.F. Berry Trust, and a \$14,000 donation from the Hutchinson Applied Agriculture Fund.

### **BOOK CHAPTERS**

Hanna, W.W., C.J. Chaparro, B.W. Mathews, J.C Burns, L.E. Sollenberger, and J.R. Carpenter. 2004. Perennial *Pennisetums*. p. 503-535. In L.E. Moser et al. (ed.) Warm-season (C<sub>4</sub>) grasses. Am. Soc. Agron. monograph no. 45. ASA, Madison, WI.

Mathews, B.W., S.C. Miyasaka, and J.P. Tritschler II. 2004. Mineral nutrition of C<sub>4</sub> forage grasses. p. 217-265. In L.E. Moser et al. (ed.) Warm-season (C<sub>4</sub>) grasses. Am. Soc. Agron. monograph no. 45. ASA, Madison, WI.

Mathews, B.W., J.P. Tritschler II, and S.C. Miyasaka. 1998. Phosphorus management and sustainability. p. 193-222. In J.H. Cherney and D.J.R. Cherney (ed.) Grass for dairy cattle. Center for Agriculture and Biosciences (CAB) International, Wallingford, Oxon, UK.

## **GOVERNMENTAL AGENCY TECHNICAL REPORTS**

Willich, M., and B. W. Mathews. 2017. Hawaii's coastal wetland soil biogeochemistry and potential impact on water quality and forage nutritive value. Report for the County of Hawai'i, Department of Research and Development. Hilo, HI.

Mathews, B.W., A.B. Simons, C. Wilen, J. Caravetta, R.E. Barker, W. Hanna. K.B. Jensen, C. Riherd, B.L. Burson, and R. Nowierski. 2003. Report of the independent panel on kikuyu grass (*Pennisetum clandestinum* Hochst. Ex Chiov) cultivars 'Whittet' and 'AZ-1'. USDA-APHIS, Riverdale, MD.

## **LEGISLATIVE REPORT**

Mathews, B.W. 2013. Feasibility report – Needs assessment for a rural outreach program in the District of Puna on the Island of Hawai'i. Report to the Twenty Eighth Session of the Hawai'i State Legislature 2014 in accordance with the provisions of Senate Resolution 150 passed in the 2013 Legislative Session. College of Agriculture, Forestry, and Natural Resource Management, Univ. of Hawai'i at Hilo.

## **DEVELOPMENT REPORT**

Mathews, B.W. 2014. Agricultural assessment and suggested plantings for the Mauna Kea Plantation Estates Project in the 'Ōuli Ahupua'a of South Kohala, Island of Hawai'i [TMK 6-2-001:051]. College of Agriculture, Forestry, and Natural Resource Management, Univ. of Hawai'i at Hilo.

## **ARTICLES IN REFEREED JOURNALS**

Willich, M., and B. Mathews. 2017. Phosphorus, sustainability, and advancing nutrient management in cropping systems. *Pac. Agric. Nat. Resour.* 7:19-28.

Rosanoff, A., E. Capron, P. Barak, B. Mathews, and F. Nielsen. 2015. Edible plant tissue and soil calcium:magnesium ratios: data too sparse to assess implications for human health. *Crop & Pasture Sci.* 66:1265-1277.

Luiz-Adrian, J.A., N.Q. Arancon, B.W. Mathews, and J.R. Carpenter. 2015. Mineral composition and soil-plant relationships for common guava (*Psidium guajava* L.) and yellow, strawberry guava (*Psidium cattleianum* var. *lucidum*) tree parts and fruits. *Commun. Soil Sci. Plant Anal.* 46:1960-1979.

Luiz-Adrian, J.A., N.Q. Arancon, B.W. Mathews, and J.R. Carpenter. 2012. Proximate analysis, *in vitro* organic matter digestibility, and energy content of common guava (*Psidium guajava* L.) and yellow, strawberry guava (*Psidium cattleianum* Var. *lucidum*) tree parts and fruits as potential forage. *J. Agric. Food Chem.* 60:10398-10405.

Mathews, B.W., J.R. Carpenter, L.E. Sollenberger, and W.M. Steiner. 2011. Macronutrients in Hawaii's coastal wetland pastures and potential phosphorus release to water. *Agron. J.* 103:830-843.

Li, Y., and B.W. Mathews. 2010. Effect of conversion of sugarcane plantation to forest and pasture on soil carbon in Hawaii. *Plant Soil* 335:245-253.

Li, Y., A. Shimabukuro-Madden, and B.W. Mathews. 2010. The effects of tree plantation rotation on earthworm abundance and biomass in Hawaii. *Appl. Soil Ecol.* 46:151-154.

Mathews, B.W., and J.R. Carpenter. 2010. Growth responses of perennial peanut and potential barrel medic forage legumes to soil pH and aluminum levels in an andisol and an ultisol. *Pac. Agric. Nat. Resour.* 2:1-8.

Mathews, B.W., J.R. Carpenter, and L.E. Sollenberger. 2009. *In vitro* digestibility and chemical composition of kikuyugrass as influenced by soil silicon, liming, and genotype. *Commun. Soil Sci. Plant Anal.* 40:2855-2873.

Shimabukuro-Madden, A., B.W. Mathews, and R.S. Senock. 2009. Second-rotation tropical tree plantation effects on fertility of a Hydudand soil in Hawaii. *Pac. Agric. Nat. Resour.* 1:27-35.

Dubeaux, J.C.B., Jr., L.E. Sollenberger, B.W. Mathews, J.M. Scholberg, and H.Q. Santos. 2007. Nutrient cycling in warm-climate grasslands. *Crop Sci.* 47:915-928.

Mathews, B.W., and C.J. Thurkins. 2007. Evaluation of a compost derived from sugarcane processing by-products. *J. Hawaiian Pacific Agric.* 14:55-66.

Mathews, B.W., and J.R. Carpenter. 2007. Fertilization, aeration, and sewage biosolid effects on kikuyugrass pasture productivity. *Soil Crop Sci. Soc. Fla. Proc.* 66:24-34.

Mathews, B.W., and C.J. Thurkins. 2006. Agronomic responses in the short-term to some management options for sugarcane top residue. *J. Hawaiian Pacific Agric.* 13:23-34.

Mathews, B.W., J.R. Carpenter, L.E. Sollenberger, and S. Tsang. 2005. Phosphorus in Hawaiian kikuyugrass pastures and potential phosphorus release to water. *J. Environ. Qual.* 34:1214-1223.

- Mathews, B.W., and L.E. Sollenberger. 2003. Use of dilute oxalate to recover exchangeable aluminum immobilized by sulfate salt addition to Rhodic Kandudult subsoil. *Commun. Soil Sci. Plant Anal.* 34:531-545.
- Mathews, B.W., S. Tsang, R.S. Senock, and L.E. Sollenberger. 2002. Soil nutrient supply under Sydney Blue Gum, N-Fixing Albizia, and naturalized Hilograss fallow in Hawai'i. *Soil Crop Sci. Soc. Fla. Proc.* 61:56-62.
- Mathews, B.W., and R.S. Senock. 2002. Comparison of the rapid Hach peroxy reagent digestion and the ignition method for estimation of total phosphorus in Hawaiian soils and sediments. *J. Hawaiian Pacific Agric.* 12:1-6.
- Mathews, B.W., J.R. Carpenter, L.E. Sollenberger, and K.D. Hisashima. 2001. Macronutrient, soil organic carbon, and earthworm distribution in subtropical pastures on an Andisol with and without long-term fertilization. *Commun. Soil Sci. Plant Anal.* 32:209-230.
- Mathews, B.W., J.R. Carpenter, E. Cleveland, Z. Gibson, and R.Y. Niino-DuPonte. 2000. Perennial forage peanut (*Arachis pintoi*) in pastures for raising replacement heifers/stocker steers in Hawai'i. *J. Hawaiian Pacific Agric.* 11:1-10.
- Mathews, B.W., and K.D. Hopkins. 1999. Superiority of S-shaped (sigmoidal) yield curves for explaining low-level nitrogen and phosphorus fertilization responses in the humid tropics. *J. Hawaiian Pacific Agric.* 10:33-46.
- Tsang, S., and B.W. Mathews. 1999. Sulfur distribution in kikuyugrass and Hanipoe soil on the slopes of Mauna Kea and Mauna Loa. *J. Hawaiian Pacific Agric.* 10:13-26.
- Mathews, B.W., J.P. Tritschler II, J.R. Carpenter, and L.E. Sollenberger. 1999. Soil macronutrient distribution in rotationally stocked kikuyugrass paddocks with short and long grazing periods. *Commun. Soil Sci. Plant Anal.* 30:557-571.
- Mathews, B.W., and R.S. Senock. 1998. Sustainable soil management in the high rainfall areas of Hawai'i Island and the use of some conventional and alternative fertilizers. *J. Hawaiian Pacific Agric.* 9:7-32.
- Mathews, B.W., J.P. Tritschler II, and S.C. Miyasaka. 1997. Sustainable phosphorus management in pasture-based dairy systems. *J. Hawaiian Pacific Agric.* 8:27-58.
- Mathews, B.W., J. Ram, and M.K. Takahashi. 1997. Neem tree establishment and soil response to the use of polypropylene ground cover cloth on a Hawaiian Andisol. *J. Hawaiian Pacific Agric.* 8:1-12.
- Mathews, B.W., J.P. Tritschler II, N.P. Douglas, and D.L. Madsen. 1996. Some chemical characteristics of soils and manures at Hawai'i Island dairies. *J. Hawaiian Pacific Agric.* 7:21-35.

- Mathews, B.W., L.E. Sollenberger, V.D. Nair, and C.R. Staples. 1994. Impact of grazing management on soil N, P, K, and S distribution. *J. Environ. Qual.* 23:1006-1013.
- Mathews, B.W., L.E. Sollenberger, P. Nkedi-Kizza, L.A. Gaston, and H.D. Hornsby. 1994. Soil sampling procedures for monitoring potassium distribution in grazed pastures. *Agron. J.* 86:121-126.
- Mathews, B.W., L.E. Sollenberger, and C.R. Staples. 1994. Dairy heifer and bermudagrass pasture responses to rotational and continuous stocking. *J. Dairy Sci.* 77:244-252.
- Ram, J., and B.W. Mathews. 1994. The need for further evaluation of some potential low-input agricultural crops for the Hamakua Coast of the Island of Hawai'i. *J. Hawaiian Pacific Agric.* 5:73-81.
- Mathews, B.W., L.E. Sollenberger, and C.R. Staples. 1994. Sulfur fertilization of bermudagrass and effect on digestion of nitrogen, sulfur, and fiber by nonlactating cows. *J. Hawaiian Pacific Agric.* 5:21-30.
- Mathews, B.W., L.E. Sollenberger, and C.R. Staples. 1994. In vitro digestibility and nutrient concentration of bermudagrass under rotational stocking, continuous stocking, and clipping. *Commun. Soil Sci. Plant Anal.* 25:301-317.
- Mathews, B.W., R.E. Joost, and L.E. Sollenberger. 1992. Some factors affecting response of 'Florida 77' alfalfa to acid-soil amendments. *Soil Crop Sci. Soc. Fla. Proc.* 51:130-135.
- Mathews, B.W., and R.E. Joost. 1990. The effects of leaching surface-applied amendments on subsoil aluminum and alfalfa growth in a Louisiana Ultisol. *Commun. Soil Sci. Plant Anal.* 21:567-581.
- Joost, R.E., B.W. Mathews, and C.S. Hoveland. 1989. Phosphorus response of sericea lespedeza on a Georgia Ultisol. *Commun. Soil Sci. Plant Anal.* 20:837-849.
- Mathews, B.W., and R.E. Joost. 1989. Use of sulfate salts to reduce subsoil aluminum toxicity: A review. *J. Hawaiian Pacific Agric.* 2:24-30.

#### **ARTICLES IN EDITED PROCEEDINGS**

- Buck, K., J.R. Carpenter, and B.W. Mathews. 2008. Use of the Cornell net carbohydrate and protein system (CNCPS) for predicting beef cattle cow-calf production in Hawaii. *Proc. West. Sect. Am. Soc. Anim. Sci* 59:179-183.
- Miyasaka, S.C., B. Mathews, P. Singleton, D. Greenough, and C. Clayton. 2007. Growth of two pasture legumes in an acid, aluminum-toxic soil. p. 36-39. *In* M.S. Thorne and L.J. Cox (ed.) *Proceedings 2007 Mealani Forage Field Day - Risk Management for Grass-Based Operations*. Mealani Res. Stn., Kamuela, HI. 28-29 Sep. 2007. CTAHR, Univ. of Hawai'i at Manoa, Honolulu.
- Buck, K., J.R. Carpenter, M.S. Thorne, and B.W. Mathews. 2007. In situ rates of insoluble macro-mineral release from alfalfa and tropical grasses, and relationships with dry matter disappearance. *Proc. West. Sect. Am. Soc. Anim. Sci.* 58:378-382.

Carpenter, J.R., and B.W. Mathews. 2006. Effects of aeration and sewage biosolids on improved kikuyugrass pasture productivity and nutrient composition. p .28-35. *In* M.S. Thorne and L.J. Cox (ed.) Proceedings 2006 Mealani Forage Field Day - Hawaii Grown Beef: From Pasture to Market. Mealani Res. Stn., Kamuela, HI. 7 Oct. 2006. CTAHR, Univ. of Hawai'i at Manoa, Honolulu.

Buck, K., J.R. Carpenter, and B.W. Mathews. 2006. Rate of dry matter and insoluble macromineral release of tropical pasture during *in situ* digestion trials in cattle. p. 18-22. *In* M.S. Thorne and L.J. Cox (ed.) Proceedings 2006 Mealani Forage Field Day - Hawaii Grown Beef: From Pasture to Market. Mealani Res. Stn., Kamuela, HI. 7 Oct. 2006. CTAHR, Univ. of Hawai'i at Manoa, Honolulu.

Gusman, V.S., J.R. Carpenter, S.C. Miyasaka, and B.W. Mathews. 2005. Assessment of calcium, phosphorus, and oxalate intake and excretion by horses grazing kikuyu grass pastures in Hawaii. p. 54-60. *In* M.S. Thorne and L.J. Cox (ed.) Proceedings 2005 Mealani Forage Field Day - Improved Livestock and Forage Production Through Sustainable Management Practices. Mealani Res. Stn., Kamuela, HI. 17 Sept. 2005. Univ. of Hawai'i Coop. Ext. Serv. CTAHR Proc. P-09/05.

Humphreys, V.T., J.R. Carpenter, B.W. Mathews, and B.A. Buckley. 2005. The effects of temperature, rainfall, month of harvest and pasture management on the mineral composition of kikuyu grass (*Pennisetum clandestinum*). p. 46-53. *In* M.S. Thorne and L.J. Cox (ed.) Proceedings 2005 Mealani Forage Field Day - Improved Livestock and Forage Production Through Sustainable Management Practices. Mealani Res. Stn., Kamuela, HI. 17 Sept. 2005. Univ. of Hawai'i Coop. Ext. Serv. CTAHR Proc. P-09/05.

Sollenberger, L.E., J.C.B. Dubeaux, Jr., H.Q. Santos, and B.W. Mathews. 2002. Nutrient cycling in tropical pasture ecosystems. p. 151-179. *In* A.M.V. Batista et al. (ed.) Proc. 39<sup>th</sup> Reunião Anual Sociedade Brasileira de Zootecnia, Recife, Brazil. 29 July - 1 Aug. 2002. Sociedade Brasileira de Zootecnia, Brasilia, Brazil.

Elevitch, C., K. Wilkinson, and B. Mathews. 1999. Contour hedgerows for mulch production in a fruit tree orchard. p. 30-33. *In* F. Jiménez and J. Beer (ed.) Proc. Int. Symp. Multi-strata agroforestry systems with perennial crops. Turrialba, Costa Rica. 22-27 Feb. 1999. Centro Agrónomico Tropical de Investigación y Enseñanza (CATIE).

Mathews, B.W., J.P. Tritschler II, and L.E. Sollenberger. 1997. Rotational stocking and soil nutrient distribution on Hawaiian grasslands. p. 119-120. *In* J.G. Buchanan-Smith et al. (ed.) Proc. XVIII Int. Grassl. Congr. Vol II., Winnipeg and Saskatoon, Canada. 8-17 June 1997. Canadian Forage Council, Calgary, Alberta, Canada.

Mathews, B.W., L.E. Sollenberger, and J.P. Tritschler II. 1996. Grazing systems and spatial distribution of nutrients in pastures: Soil considerations. p. 213-229. *In* R.E. Joost and C.A. Roberts (ed.) Nutrient cycling in forage systems. Vol. I., Proc. Nutrient Cycling Symposium, Columbia, MO. 7-8 March 1996. Potash and Phosphate Institute (PPI) and the Foundation for Agronomic Research (FAR), Manhattan, KS.



Mathews, B.W., L.E. Sollenberger, C.R. Staples, C.B. Mathews, and C.G. Chambliss. 1993. Impact of grazing dairy cattle on phosphorus cycling and water quality in a high water table pasture. p. 1560-1562. *In* L.R. Humphreys et al. (ed.) Proc. XVII Int. Grassl. Congr. Vol. II., Hamilton, NZ. 13-16 Feb. 1993. Keeling and Mundy Ltd., Palmerstown North, NZ.

#### ARTICLES IN PROCEEDINGS OF DISCIPLINARY OR LOCAL COLLOQUIA

Mathews, B.W., and B.C. Mahilum. 2004. Tropical soils - Brief account of their genesis and nature. 8 pp. Paper presented at the 2004 Field Conf. of the Nat. Assoc. of Geoscience Teachers, Big Island, HI. 6-7 Aug. 2004.

Mathews, B.W. 2001. Perennial forage peanut for free range cattle. p. 3. *In* H.M. Zaleski (summ. ed.) Out to Pasture - Creative Pasture Management for Free-Range Poultry, Pigs, Sheep and Cattle. Concurrent Session IIA - Hawaii Agric. 2001 Conf., Hilo, HI. 26-27 Jan. 2001. CTAHR, Univ. of Hawaii at Manoa, Honolulu, HI.

Carpenter, J.R., B.W. Mathews, B.R. LeaMaster, B.A. Buckley, and R.Y. Niino-DuPonte. 1999. Effect of stocking rate on cow-calf productivity while grazing improved kikuyu pasture during fall versus spring calving seasons. 8 pp. Paper presented at the 1999 Hawaii Beef Cattle (Cow/ Calf) Workshop, Kamuela, HI. 26 March 1999. Univ. of Hawaii Coop. Ext. Serv.

Mathews, B.W., J.R. Carpenter, and Z. Gibson. 1999. Soil-plant-animal system investigations in progress at the Mealani Experiment Station and Pu'u'ala Farm and Ranch. 3 pp. Paper presented at the 1999 Hawaii Beef Cattle (Cow/ Calf) Workshop, Kamuela, HI. 26 March 1999. Univ. of Hawaii Coop. Ext. Serv.

Mathews, B.W., and S.A. Shehata. 1996. Evaluation of farmer training and recommendations for the future. p. 39-42. *In* Proc. Agriculture...Visions for Hawaii's Future: Considering a Center for Rural Economic Development. 11 Jan. 1996. Univ. of Hawaii at Hilo, College of Agriculture, Hilo, HI.

Mathews, B.W., and J. Ram. 1994. Soils and fertility in sustainable agriculture. p. 22-35. *In* Proc. 4th Annu. Hawaii Conf. of the World Sustainable Agric. Assn. 11-12 Nov. 1994. World Sustainable Agriculture Association, Honolulu, HI.

Mathews, B.W., L.E. Sollenberger, and C.R. Staples. 1992. Grazing systems for raising replacement heifers on bermudagrass pasture: Animal, plant, and soil responses. p. 106-121 *In* Proc. 29th Annu. Florida Dairy Prod. Conf., Gainesville, FL. 14-16 April 1992. Univ. of Florida, Gainesville.

Mathews, B.W., and R.E. Joost. 1989. Reduction of subsoil aluminum toxicity to alfalfa by leaching of surface-applied amendments. p. 54-58. *In* Proc. 1989 Am. Forage Grassl. Conf., Guelph, ON, Canada. 22-25 May 1989. Am. For. Grassl. Council, Georgetown, TX.

#### ARTICLES IN NEWSLETTERS

Mathews, B. 2017. Sustainable economic development visions in West Sumatra, Indonesia: New opportunities for Hawaii as an agricultural technology node and as a model for self-reliant food and wood production in tropical islands. CAFNRM/Agriculture Club Newsletter. Dec (2017):2-3.

Mathews, B. 2017. Is food independence realistically achievable on the Big Island? CAFNRM/Agriculture Club Newsletter. Jan-Feb (2017):2

Mathews, B. 2016. Summary of Indonesia, Malaysia, and Philippines Travels, November, 2016. CAFNRM/Agriculture Club Newsletter. Nov-Dec (2016):4-6, 10-14.

Mathews, B. 2016. Unlocking Hawaii's food production potential is likely to remain a slow march forward. CAFNRM/Agriculture Club Newsletter. Sep-Oct (2016):4-5,7..

Mathews, B. 2016. The nutrient management challenge of Hilo coast upland soils (Acridoxic Hydrudands). CAFNRM/Agriculture Club Newsletter. April-May (2016):4,7-9.

Mathews, B. 2016. Follow up on Nature/Natural Farming and the emerging need for locally grown alfalfa. CAFNRM/Agriculture Club Newsletter. March (2016):4,7-8.

Mathews, B. 2016. An organic farming revolution for East Hawaii based on Nature/Natural Farming? CAFNRM/Agriculture Club Newsletter. February (2016):3,7-9.

Mathews, B. 2015. Navigating a sustainable future in Hawaii – The search for increased agricultural self-sufficiency. Rotary Club of Hilo Bay BayWatch 12 (Sep 10, 2015):1-3.

Mathews, B. 2015. Hawai'i needs versatile agricultural professionals to meet workforce demand. UH Hilo Stories May (2015):1-3.

Mathews, B. 2015. Sustainable intensification of smallholder agriculture. Nihopeku. February (2015):1-4.

Mathews, B. 2013. Organic farming sustainability challenges and myths. CAFNRM/Agriculture Club Newsletter. October (2013):3-4, 6-7.

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Mathews, B. 2013. Traditional farming systems & agrotechnology transfer for sustainability. CAFNRM/Agriculture Club Newsletter. February (2013):3.

Mathews, B. 2012. Agricultural history of Hawaii: Looking backward and forward. CAFNRM/Agriculture Club Newsletter. June (2012):2.

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Mathews, B.W., J. Ram, M.K. Takahashi. 1999. Neem, mahogany's medical cousin, useful in Hawai'i. Woods Newsl. Forestry Conserv. 7(3):5.

## **PEER REVIEW**

Routinely review grants and articles for the USDA, American Society of Agronomy, Crop Science Society of America (CSSA), Soil Science Society of America, Forage and Grazinglands, American Society for Range Management, Scientia Agricola (Brazil), and the Society for Ecological Restoration. Served as a CSSA Associate Editor for Forage and Grazinglands from 2005-2010. Associate Editor for Scientia Agricola 2011-2012.

## **TELEVISED LOCAL PRESENTATIONS**

Presented talks on agroecology, tropical forestry, sustainable food production, alternative agriculture, soil fertility, and curd making-cooking for the "Focus on Agriculture", "Hawaii Cooks", "Neways" television shows.

## **SEMINARS AND LECTURES**

Presented over 30 talks for meetings of various organizations including the American Society of Agronomy, American Forage and Grassland Council, World Sustainable Agriculture Assn., Soil and Crop Science Society of Florida, National Association of Geoscience Teachers, Florida Dairy Producers Assn., Career and Technical Educators (CTE) Conference, Permaculture Assn., Hawaii Agriculture Conference, Hawaii Society of American Foresters, Hawaii Forest Industry Assn., Hawaii County Council-Chamber of Commerce, Hawaii Sustainable Agriculture Systems Assn., Sierra Club, Upward Bound, and Global Hope.

## **SEMINARS HOSTED AT UH HILO**

Automated Food Analysis and Food Safety Management, The State of Agriculture Land Use in Hawaii 2016, Food Forestry, Needs Assessment for a Rural Outreach Program, Functional Foods – Development-Marketing-Consumption, Building Momentum Towards a Resilient and Sustainable Local Farming Culture, New Farmer Training Symposium, Agroforestry Solutions, Climate Smart Agriculture, Cooperative Integrated Farming.

## **REFERENCES FOR DR. BRUCE W. MATHEWS**



[REDACTED]

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[REDACTED]

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