

Travis Idol
College of Tropical Agriculture and Human Resources
Natural Resources and Environmental Management
FTE Distribution: 65% I; 35% R; 0% E

Education

B.S.	Biology	Wake Forest University
M.S.	Forestry	Purdue University
Ph.D.	Forestry	Purdue University

Lifetime and Fellow Achievement Awards (peer nominated and endorsed national and International-important for those without accreditation that is peer nominated and endorsed, recognized)

Professional Appointments

2019-2021 Department Chair, NREM, UH-Manoa
2019-present Professor of Tropical Forestry and Agroforestry, NREM, UH-Manoa
2009-2019 Assoc. Professor of Tropical Forestry and Agroforestry, NREM, UH-Manoa
2002-2009 Asst. Professor of Tropical Forestry and Agroforestry, NREM, UH-Manoa
2005-2007 Head of NREM Undergraduate Advising and Program Assessment
2012-2019 Head of NREM Undergraduate Advising and Program Assessment
2000-2002 Post Grad. Researcher, Land, Air, and Water Resources, University of California, Davis, CA
1995-2000 Grad. Research Asst., Forestry and Natural Resources, Purdue University, West Lafayette, IN

Courses Taught

Undergraduate

2010-present	Co-Instructor	NREM 105 Environmental Service Learning (3 cr).
2018	Instructor	NREM 192 Introduction to NREM (1 cr)
2016-2017	Instructor	NREM 292 Internship Preparation (1 cr)
2022-2025	Instructor	NREM 301L Natural Resource Management Laboratory (1 cr)
2005-present	Instructor	NREM 306 Environmental Ethics/Sustainability Ethics (3 cr)
2002-present	Instructor	NREM 380 Tropical Forestry and Agroforestry (3 cr)
2018-present	Instructor	NREM 480 Applied Forest Ecology (3 cr)
2002-present	Instructor	NREM 492 Internship Experience (3 cr)

Graduate

2014-2015	Instructor	NREM 600 (3 cr).
2010-present	Instructor	NREM 695 Master's Plan B Capstone Preparation (1 cr).
2010-present	Instructor	NREM 696 Master's Plan B Capstone Project (3 cr).
2004-2010	Instructor	NREM 691 Forest Nutrition and Biogeochemistry (3 cr)

Publications (reverse chronological order)

Books and Book Chapters

- Pradhan, A, PK Roul, **T Idol**, and R Karde. 2022. Maize based conservation agriculture production systems (CAPS) improve crop yield, system productivity and profitability in rainfed uplands of India. Research Highlights in Agricultural Sciences Vol. 5:1-14.
- Youkhana A and **T Idol**. 2018. Cut-and-carry for sustaining productivity and carbon sequestration in agroforestry systems: coffee-Leucaena example. pp. 565-586 In Dagar, JC (Ed). Agroforestry: anecdotal to modern science. Springer. URL: <http://www.springer.com/series/15448>
- Idol T**. 2015. A brief history of conservation agriculture. In C. Chan-Halbrendt and J. Fantle-Lepczyk (eds.) Conservation Agriculture in Subsistence Farming: Case Studies from South Asia and Beyond. CABI, Oxford. pp. 1-21.
- Pradhan A, **T. Idol**, P.K. Roul, K.N. Mishra, C. Chan-Halbrendt, J. Halbrendt, and C. Ray. 2015. Effect of tillage, intercropping and residue cover on crop productivity, profitability and soil fertility under tribal farming situations of India. In C. Chan-Halbrendt and J. Fantle-Lepczyk (eds.) Conservation Agriculture in Subsistence

- Farming: Case Studies from South Asia and Beyond. CABI, Oxford. pp. 77-94.
- Roul P.K., A Pradhan, P. Ray, K.N. Mishra, S.N. Dash, C. Chan-Halbrendt, T. **Idol** and C. Ray. 2015. Influence of maize-based conservation agricultural production systems (CAPS) on crop yield, profitability and soil fertility in rainfed uplands of Odisha, India. In C. last updated September 2019 Chan-Halbrendt and J. Fantle-Lepczyk (eds.) Conservation Agriculture in Subsistence Farming: Case Studies from South Asia and Beyond. CABI, Oxford. pp. 95-108
- Halbrendt J, L Shariq, C Lai, T **Idol**, C Ray, PV Roul, and KN Mishra. 2013. 12 pp. In Development of an integrated approach for introducing conservation agricultural practices to the tribal communities of Odisha, India. Mulvaney, MJ, MR Reyes, C. Chan-Halbrendt, S.
- Boulakia, K. Jumpa, C. Sukvibool and S. Sobatpanit (eds). Conservation Agriculture in Southeast Asia and Beyond. Funny Publishing, Bangkok, Thailand.
- Idol** T, Haggard J, and Cox L. 2011. Ecosystem services from smallholder forestry and agroforestry in the tropics. p. 209-270 In WB Campbell and SL Lopez (eds.) Integrating agriculture, conservation, and ecotourism: examples from the field. Springer, New York.

Conference Proceedings

- Idol** T. Stand management of koa: thinning and fertilization. 2017. pp. 30-34 In Ohara, RD and JB Friday (Eds). Acacia koa in Hawaii: facing the future. 2016 Koa Symposium Proceedings. 05 October 2016, Hilo, HI. Tropical Hardwood Tree Improvement and Regeneration Center and College of Tropical Agriculture and Human Resources, University of Hawaii-Manoa, Honolulu, HI.
- Lai, C., C. Chan-Halbrendt, J. Halbrendt, P. Roul, T. **Idol**, C. Ray and C. Evensen. 2011. Comparative economic analysis of conservation agricultural practices in tribal villages in India. Proceedings of the 21st Annual IFAMA World Forum and Symposium in Frankfurt, Germany (June 2011).
- Idol** TW, Steiman S, Bittenbender HC, Gautz L, and Jackson, M. 2007. Not all shade is created equal: reflections on shade management based on preliminary studies from Hawaii. Second International Symposium on Multi-Strata Agroforestry Systems with Perennial Crops. Sept. 17-22, 2007. CATIE, Turrialba, Costa Rica.
- Steiman S, Bittenbender HC, **Idol** TW, Gautz LD, Jackson MC. 2007. Shade coffee in Hawaii --the impact of light on coffee quality. 21st International Conference on Coffee Science, Montpellier, France, 11-15 September, 2006. Paris: Association Scientifique Internationale du Cafe (ASIC), p.1214-1216.
- Steiman S, **Idol** TW, Bittenbender HC, Gautz LD, Jackson MC. 2007. Physiological response of coffee to different shading regimes. 21st International Conference on Coffee Science, Montpellier, France, 11-15 September, 2006. Paris: Association Scientifique Internationale du Cafe (ASIC), p.1212-1213.
- Jackson MC, Steiman SR, Gautz LD, Bittenbender HC, **Idol** TW. 2007. Quality determination and group discrimination of shade grown coffee using solid phase microextraction as a means of coffee discrimination. 21st International Conference on Coffee Science, Montpellier, France, 11-15 September, 2006. Paris: Association Scientifique Internationale du Cafe (ASIC), p. 306-309.
- Idol** TW, Pope PE, and Ponder Jr F. 2002. The effects of harvesting on long-term soil productivity in southern Indiana oak-hickory forests. pp. 233-238 In Outcalt, K.W. (Ed.) Proc. 11th Bienn. South. Silv. Res. Conf., Mar. 20-22, 2001, Knoxville, TN. Gen. Tech. Rep. SRS-48. U.S. Dept. Agric., For. Serv., South. Res. Stn, Asheville, N.C.
- Idol** TW, Pope PE, Tucker J, and Ponder Jr F. 1998. The role of fine root dynamics in the N and P cycles of regenerating upland oak-hickory forests. pp. 136-140 In Waldrop, T.A. (Ed.) Proc. 9th Bienn. South. Silv. Res. Conf., Feb. 25-27, 1997, Clemson, SC. Gen. Tech. Rep. SRS-20, US Dept. Agric., Forest Service, Southern Research Station, Asheville, NC.
- Idol** TW, PE Pope, and F Ponder Jr. 1997. Changes in fine root dynamics and distribution along a chronosequence of upland oak-hickory forests. pp. 170-171 In: Pallardy, Stephen G.; Cecich, Robert A.; Garrett, H. Gene; Johnson, Paul S., eds. Proceedings of the 11th Central Hardwood Forest Conference; Gen. Tech. Rep. NC-188. St. Paul, MN: U.S. Department of Agriculture, Forest Service, North Central Forest Experiment Station.

Refereed Journal Publications

- Thyoff, EC, JB Friday, TW Idol, MA Szuter, and DF Jacobs. 2024. Tradeoffs in access to light and root networks of established host trees for restoration planting of the root hemiparasite *Santalum paniculatum*. Restor Ecol 32: e14180. doi: 10.1111/rec.14180.
- Thyoff E., KME Rose, T. **Idol**, Q Moon, OT Burney, D Jacobs. 2023. Co-planting of a fast-growing, nitrogen-fixing host tree facilitates regeneration of the root hemiparasitic 'ilahi (Hawaiian sandalwood). Forest Ecology and Management 542: 121084.

- Honda, MDH, A Youkhana, **T Idol**, and D. Borthakur. 2022. A maceration treatment of leucaena foliage improves its nutritional value by reducing mimosine concentration. *Tropical Grasslands (Forrajes Tropicales)* 10:1-14. doi: [10.17138/TGFT\(10\)1-14](https://doi.org/10.17138/TGFT(10)1-14)
- Idol TW** and A Youkhana. 2020. A rapid visual estimation of fruits/lateral to predict coffee yield in Hawaii. *Agroforestry Systems* 90:325–337. doi: [10.1007/s10457-019-00370-y](https://doi.org/10.1007/s10457-019-00370-y)
- Idol TW**. 2019. A short review of leucaena as an invasive species in Hawaii. *Tropical Grasslands (Forrajes Tropicales)* 7:290-294. doi: [10.17138/TGFT\(7\)290-294](https://doi.org/10.17138/TGFT(7)290-294).
- Idol TW**, A Youkhana, and RP Santiago. 2019. Vegetative and micropropagation of *Leucaena*. *Tropical Grasslands (Forrajes Tropicales)* 7:87-95. doi: [10.17138/TGFT\(7\)87-95](https://doi.org/10.17138/TGFT(7)87-95)
- Idol TW** and G. Diarra. 2017. Mycorrhizal colonization is compatible with exponential fertilization to improve tree seedling quality. *Journal of Plant Nutrition* 40: 283-297. doi: [10.1080/01904167.2016.1240188](https://doi.org/10.1080/01904167.2016.1240188).
- Idol TW**, RM Morales, JB Friday, and PG Scowcroft. 2017. Precommercial release thinning of potential *Acacia koa* crop trees increases stem and crown growth in dense, 8-year-old stands in Hawaii. *Forest Ecology and Management* 392:105-114. doi: [10.1016/j.foreco.2017.02.029](https://doi.org/10.1016/j.foreco.2017.02.029)
- Pradhan A, **Idol T** and Roul PV. 2016. Conservation agriculture practices in rainfed uplands of India improve maize-based system productivity and profitability. *Frontiers in Plant Science* 7 (1008). doi: [10.3389/fpls.2016.01008](https://doi.org/10.3389/fpls.2016.01008).
- Youkhana A and **TW Idol**. 2016. Leucaena-KX2 mulch additions increase growth, yield and soil C and N in a managed full-sun coffee system in Hawaii. *Agroforestry Systems* 90:325-337. doi: [10.1007/s10457-015-9857-Z](https://doi.org/10.1007/s10457-015-9857-Z).
- Lai C, C Chan, J Halbrecht, L Shariq, P Roul, **T Idol**, C Ray, and C Evensen. 2012. Comparative economic and gender, labor analysis of conservation agriculture practices in tribal villages in India. *International Food and Agribusiness Management Review* 15:73-86.
- Martinez Morales R, **Idol TW**, Friday JB, and Chen Q. 2012. Differentiation of koa forest stands across an elevation gradient in Hawaii using fine resolution remotely sensed imagery. *International Journal of Remote Sensing* 33:3492-3511. doi:[10.1080/01431161.2011.629234](https://doi.org/10.1080/01431161.2011.629234).
- Martinez Morales R, **Idol T**, and Friday JB. 2011. Assessment of *Acacia koa* forest health across environmental gradients using fine resolution remote sensing and GIS. *Sensors* 11:5677-5694. doi:[10.3390/s110605677](https://doi.org/10.3390/s110605677).
- Steiman S, **Idol TW**, and Bittenbender HC. 2011. Shade coffee in Hawaii-exploring some aspects of quality, growth, yield, and nutrition. *Scientiae Horticulturae* 158:152-158. doi:[10.1016/j.scienta.2011.01.011](https://doi.org/10.1016/j.scienta.2011.01.011).
- Youkhana A and **Idol T**. 2011a. Addition of *Leucaena*-KX2 mulch in a shaded coffee agroforestry system increases both stable and labile soil C fractions. *Soil Biology and Biochemistry* 43:961-966. doi:[10.1016/j.soilbio.2011.01.011](https://doi.org/10.1016/j.soilbio.2011.01.011).
- Youkhana A and **Idol T**. 2011b. Allometric models for predicting above- and belowground biomass of *Leucaena*-KX2 in a shaded coffee agroecosystem in Hawaii. *Agroforestry Systems*. 83:331-345 doi: [10.1007/s10457-011-9403-6](https://doi.org/10.1007/s10457-011-9403-6).
- Youkhana A and **Idol T**. 2011c. Growth, yield and value of managed coffee agroecosystem in Hawaii. *Pacific Agriculture and Natural Resources*. 2:12-19.
- Scowcroft PG, Friday JB, Haraguchi J, **Idol TW**, and Dudley N. 2010. Poor stem form as a potential obstacle to private investment in koa plantation forestry in Hawaii. *Small-Scale Forestry* 9:243-262. doi: [10.1007/s11842-009-9107-1](https://doi.org/10.1007/s11842-009-9107-1).
- Youkhana A and **Idol TW**. 2009. Tree pruning mulch increases soil carbon and nitrogen in shade and full sun coffee agroecosystems in Hawaii. *Soil Biology and Biochemistry*. 41:2527-2534.
- Meason DF, **Idol TW**, Friday JB, and Scowcroft PG. 2009. Persistence of elevated phosphorus availability after fertilisation in the volcanic soil of a managed tropical forest. *Forest Ecology and Management* 258:2199-2206.
- Meason D and **Idol TW**. 2008. Comparison of ion exchange resin membranes (PRS-probes) with resin bags in the field: effects of incubation time, soil depth, and P fertilization. *Soil Science Society of America Journal* 72:1806-1814.
- Youkhana A and **Idol T**. 2008. First-year biomass production and soil improvement in young *Leucaena* and *Robinia* stands under different pollarding systems. *Journal of Tropical Forest Science* 20:181-187.
- Martinez Morales R, Miura T, and **Idol T**. 2008. An assessment of Hawaiian dry forest condition and restoration potential with fine resolution remote sensing. *Forest Ecology and Management* 255:2524-2532.
- Steiman SR, **Idol TW**, and Bittenbender HC. 2007. Analysis of kaolin particle film usage and its application on coffee. *HortScience* 42:1605-1608.
- Idol TW**, Baker PJ, and Meason D. 2007. Indicators of forest ecosystem productivity and nutrient status across precipitation and temperature gradients in Hawaii. *Journal of Tropical Ecology* 23:693-704.

Scowcroft PG, Friday JB, **Idol TW**, Dudley N, Haraguchi J, and Meason D. 2007. Growth response of *Acacia koa* trees to thinning, grass control, and phosphorus fertilization in a secondary stand in Hawaii. *For. Ecol. Manage.* 239:69-80.

Idol TW, Pope PE, and Ponder Jr F. 2003. N mineralization, nitrification, and N uptake across a 100-year chronosequence of upland hardwood forests. *For. Ecol. Manage.* 176:509-518.

Idol TW, Pope PE, and Ponder Jr F. 2002. Changes in microbial nitrogen across a 100-year chronosequence of upland hardwood forests. *Soil Sci. Soc. Am. J.* 66:1662-1668.

Idol TW, Holzbaaur KA, Pope PE, and Ponder Jr F. 2002. Control-bag correction for forest floor litterbag contamination. *Soil Sci. Soc. Am. J.* 66:620-623.

Idol TW, Figler RA, Pope PE, and Ponder Jr F. 2001. Characterization of coarse woody debris across a 100 year chronosequence of upland oak-hickory forests. *For. Ecol. Manage.* 149:153-161.

Idol TW, Pope PE, and Ponder Jr. F. 2000. Fine root dynamics across a chronosequence of upland temperate deciduous forests. *Forest Ecology and Management* 127:153-167.

Extension Publications

Idol TW, A Youkhana, M Oshiro, S Sand, R Jha, and D Borthakur. 2024. Silvopasture with seedless hybrids of *Leucaena*. *Hānai ‘Ai* 53: Jan-Mar 2024.

Idol TW, T Radovich, and S Sipes. 2024. Hui Ko‘e ‘Āina: worming our way to sustainable food systems. *Hānai ‘Āi* 54: Oct-Dec 2024.

Creative Works (i.e., Extension Videos, Websites, Blogs, Creative Designs and Exhibitions, etc.)

Leadership Roles (Committees, Boards, Advisory, etc.)

Department Service

- Faculty Search Committee Member, 5 separate faculty positions, 2 as committee chair
- Website Subcommittee Chair, 2003-2005
- Graduate Program Committee Member, 2002-2005
- Undergraduate Program Chair and Head of Advising, 2005-2007, 2012-present
- Coordinator, Sherman Courtyard Relandscaping Project
- Site Manager, NREM greenhouse, headhouse, and field space at CTAHR Magoon Instructional & Research Facility, 2009-present

College Service

- Faculty Senate Member, 2003-2007, 2009-2011, 2017-2019
- Faculty Senate Executive Committee, 2005-2007, 2010-2013, 2018-2020
- Student Research Symposium Planning Committee, 2004-2017

University Service

- Ecology, Evolution, and Conservation Biology Program, 2003-present
- UH Honor's Program Council Member, 2003-2005
- UH Sustainability Council, curriculum committee member, 2006-2008

Professional Service

- Hawaii Forest Institute, Board Member and Vice-President, 2006-2009; President, 2009-present
- Hawaii Forest Industry Association, Board Member, 2007-2008
- Society of American Foresters, Annual Silviculture Instructor's Tour, Lead Coordinator and Tour Guide, 2011
- Tropical Hardwood Tree Regeneration and Improvement Center, Advisory Board Member, 2016-present

Graduate Students

<u>Category</u>	<u>Current Number of Students</u>	<u>Number Graduated (Career)</u>
Chair of Master's Committees	2	4
Chair of PhD Committees	1	6
Member of Master's Committees	1	7
Member of PhD Committees	1	10

Grant Support

Project Title	Funding Agency	Amount	Time Period
Environmental Controls on <i>Acacia koa</i> Productivity in Hawaii (PI)	USDA Forest Service	17,841	6/03-3/05
Monitoring of Forest Health in Hawaii's Dry Forest Ecosystems (PI)	USDA Forest Service	68,000	10/03-9/08
Koa Productivity and Nutrient Use Efficiency in Response to Fertilization (PI)	USDA McIntire-Stennis	99,904	10/03-9/08
Development of Shade Coffee Agroecosystems In Hawaii (PI)	USDA TSTAR	144,506	10/03-9/07
Controlling Invasive Species with Novel Agroforestry Systems Utilizing Native Plants (PI)	USDA TSTAR	117,791	10/04-9/09
Developing productivity models and silvicultural guidelines for growing and managing the native Hawaiian hardwood <i>Acacia koa</i> (PI)	USDA McIntire-Stennis	60,000	10/05-9/08
Treatment and Reuse of Urban Storm Water With a Customized Constructed Wetland (PI)	US EPA P3 Student Sustainability Design	9,968	09/07-05/08
New Innovations in Native Forest Restoration for High-Elevation Rangelands...(co-PI)	USDA NRCS Conservation Innovation Grant	46,040	10/07-09/09
An Integrated Strategy to Restore Degraded Dry Forests in Hawaii (PI)	USDA McIntire-Stennis	60,000	10/08-09/11
Assessment of <i>Acacia koa</i> forest cover and productivity across environmental gradients in Hawaii using fine resolution remote sensing (PI)	State of Hawaii, Division of Forestry and Wildlife	20,000	10/08-12/09
Innovative greenhouse management for improved outplanting performance of native Hawaii tree seedlings (PI)	USDA McIntire-Stennis	140,000	10-09-09/16
Sustainable Management of Agroecological Resources by Tribal Societies (SMARTS) (co-PI)	US AID, SANREM-CRSP	1,384,915	01/10-12/14
Selection and propagation of koa and <i>Leucaena</i> for production of high-value hardwoods (PI)	USDA McIntire-Stennis	64,500	10/12-09/15
SMARTS2 (co-PI)	Belmont Forum FACCE-JPI	224,000	07/14-12/15
Mentorship for Visiting Scholar (PI)	World Cocoa Foundation	16,350	08/14-07/15
Improvements in Vegetative Propagation of Koa and <i>Leucaena</i> (PI)	USDA McIntire-Stennis	50,000	10/15-09/17
Mentorship for Visiting Scholar (PI)	World Cocoa Foundation	17,697	03/16-01/17
Use of N-fixing Multipurpose Trees to Enhance Entomopathogenic Nematodes Biocontrol Activities Against Coffee Berry Borers (co-PI)	Hatch Supplemental	23,000	10/17-09/18
Co-invasion leapfrog: modelling the influence of invasive microbial symbionts on aiding the	UH C-MAIKI seed grant	12,000	04/18-03/19

spread of their co-invading hosts (co-PI)			
Experiential Learning for Resilient C: Culture, Community, Conservation, Climate (PI)	AFRI, Educational Literacy Initiative	278,688	04/18-04/22
Investigation of Host Suitability and Resource Transfer for Seedlings of Endemic Sandalwood (<i>Santalum</i>) Species in Hawaii to Improve	USDA McIntire-Stennis	125,000	08/20-07/25
Regeneration and Outplanting Success: A key to sustainable Hawaiian agricultural production resides with the endemic sandalwood species	Western Sustainable Agriculture Research and Education	24,997	07/20-06/22
Seedless <i>Leucaena</i> Hybrids for Sustainable Silvopasture Systems	Western Sustainable Agriculture Research and Education	348,722	06/23-05/26
Improving Sustainable Hawaiian Sandalwood Silviculture and Endemic Species Conservation with Mixed Stand Management	Western Sustainable Agriculture Research and Education	30,000	05/24--04/26
Transforming Food Waste into Sustainable Student Learning Outcomes and Community Values	UHM Provost Strategic Investment Initiative	87,150	07/24-06/26

Presentations at Conferences

Wirabuana YAP, **TW Idol**, and EC Thyroff. 2024. Forest community structure determines the balance of facilitation and parasitism between sandalwood and host species in a Hawaiian restored tropical dry forest. Poster Presentation. 2024 National Silviculture Workshop. 16-18 July, 2024. Olympia, WA.

Idol T, A, Youkhana, and RP Santiago. 2022. The Potential of Seedless *Leucaena* Hybrids for Silvopasture Systems in the Tropics and Subtropics of the US. Poster Presentation. Society of American Foresters National Convention. 20-24 September 2022. Baltimore, MD.

Thyroff, E, **T Idol**, and D. Jacobs. 2022. Facilitating Artificial Regeneration of Hemiparasitic ‘Iliahi, Hawaiian Sandalwood (*Santalum paniculatum*). Oral Presentation. Society of American Foresters National Convention. 20-24 September 2022. Baltimore, MD.

Thyroff, E, **T Idol**, and D Jacobs. 2021. Regeneration of ‘Iliahi: Hemiparasitic Relationships in Hawaiian Tropical Dry Forests. Oral Presentation. Kūlia i ka huliau — Striving for change. Hawaii Conservation Conference, 27-29 July 2022. Honolulu, HI.

Idol T, A Youkhana, and RP Santiago. 2018. Vegetative and micropropagation of *Leucaena*. International *Leucaena* Conference, University of Queensland, 01-03 November 2018, Brisbane, Australia.

Idol T. 2018. A short review of *Leucaena* introduction and spread in Hawaii. International *Leucaena* Conference, University of Queensland, 01-03 November 2018, Brisbane, Australia.

A. Youkhana, **T. Idol**. 2017. Productivity and ecosystem services of *Leucaena*-KX2. Sterile *Leucaena* Workshop. Department of Primary Industries and Regional Development, Government of Western Australia, 13-14 December 2017, Perth.

Idol T, J. Brewbaker. 2017. *Leucaena* hybrids and sterility: the University of Hawaii collection. Sterile *Leucaena* Workshop. Department of Primary Industries and Regional Development, Government of Western Australia, 13-14 December 2017, Perth.

T. Idol, JB Friday, P Scowcroft. 2017. Stand management of *Acacia koa* in Hawaii. National Silviculture Workshop. US Dept of Agric, Forest Service, 18-20 July 2017, Flagstaff, AZ.

T. Idol. Stand management of koa: thinning and fertilization. 2016. *Acacia koa* in Hawaii: facing the future. 05

October 2016, Hilo, HI.

- T Idol**, G Diarra, JB Friday, and B Kaufmann. 2016. Doubling down on exponential fertilization and mycorrhizal inoculation of *Acacia koa* seedlings. Nahelehele Dryland Forest Symposium. 26 February 2016, Kailua-Kona, HI.
- B.S. Sipes, P.K. Roul, W.H. van der Putten, T. Masuda, C.K.Y. Chan, K.N. Mishra, and **T.W. Idol**. 2014. Conservation Agricultural Practices - Climate Smart Technologies to Enhance Tribal Community Resilience. Japan Society for International Development 25th Annual Conference.
- Idol TW**. Integrating nitrogen fixing trees in tropical forest plantations. Society of American Foresters National Convention. 08-11 October 2014, Salt Lake City, UT.
- Masuda T, C. Chan-Halbrendt, P.K. Roul, B. Sipes, W.H. van der Putten, **T.W. Idol**, and S. Gray. Sustainable Management of Agro-ecological Resources for Tribal Societies 2 (SMARTS2): Overview of the Belmont Forum International Opportunities Fund Research Project. 29-30 November 2014. Japan Society for International Development, 25th Annual Conference.
- Roul PK, KN Mishra, SN Dash, A Pradhan, **TW Idol** and C Chan-Halbrendt. Effect of Maize Based Conservation Agriculture Production Systems on Productivity and Soil Properties in Rainfed Uplands of India. 29-30 November 2014. Japan Society for International Development, 25th Annual Conference.
- Diarra G and **TW Idol**. Effect of exponential nutrient loading and mycorrhizal inoculation on *Acacia koa* seedling survival at outplanting on former Hawaii pasture lands. Nahelehele Dry Forest Symposium. 31 March 2013. Kaahahui O Ka Nahelehele.
- Diarra G and **TW Idol**. Compatibility and benefits of exponential fertilization and mycorrhizal inoculation. Society of American Foresters National Convention. 23-27 October 2013, North Charleston, SC.
- Pradhan A, **T Idol**, PK Roul, KN Mishra, M Kar. Effects of a maize-based conservation agriculture production system on soil quality. Fourth International Conference on Conservation Agriculture in South Asia. 12-14 December 2013, Battambang, Cambodia.
- Pradhan A, **T. Idol**, P. K. Roul, C. Chan-Halbrendt, J. Halbrendt, M Kar. Effects of a maize-based conservation agriculture production system on crop yield in Odisha, India. Fourth International Conference on Conservation Agriculture in South Asia. 12-14 December 2013, Battambang, Cambodia.
- Diarra G, **T Idol**, JB Friday, and J Leary. Effects of exponential nutrient loading and arbuscular mycorrhizal inoculation on *Acacia koa* nutrient dynamics on former Hawaiian pasture. Small-Scale Forestry Conference. International Union of Forest Research Organizations, 24-27 September 2012, Amherst, MA.
- Idol T**, A Pradhan, C Chan-Halbrendt, PK Roul, KN Mishra, J Halbrendt and C Evensen. Effect of maize based conservation agriculture production systems (CAPS) under tribal farming situations of Odisha in India. 2012 Annual meeting of the ASA-CSSA-SSSA. 22-25 October 2012, Cincinnati, OH.
- Scowcroft PG, JB Friday and **TW Idol**. Advantage conferred on koa crop trees by targeted silviculture persists despite overall slowing growth rates. Hawaii Conservation Conference. 31 July-02 August 2012. Hawaii Conservation Alliance. Honolulu, HI.
- Idol TW**. Conservation agriculture and soil health: the US perspective. Workshop on Conservation Agriculture in Orissa, India. 24 December 2011, Bhubaneswar, India.
- Diarra G and **TW Idol**. Optimizing fertilization and root symbioses to improve seedling performance in abandoned pastures of Hawaii. Society of American Foresters National Convention. 02-06 November 2011, Honolulu, HI.
- Elevitch C, **T Idol**, and J Friday. Shade-grown coffee, Kona style: a twelve-farm case study. Society of American Foresters National Convention. 02-06 November 2011, Honolulu, HI.
- Friday J, **T Idol**, P Scowcroft, D Meason, and R Martinez-Morales. Carbon sequestration possibilities in koa forest restoration in Hawaii. Society of American Foresters National Convention. 02-06 November 2011, Honolulu, HI.
- Iwashita D, J Friday and **T Idol**. A history of watershed protection: forestry in Hawaii. Society of American Foresters National Convention. 02-06 November 2011, Honolulu, HI.

- Nazario-Leary C and **TW Idol**. Understory forest cultivation of native plants under different light conditions. Society of American Foresters National Convention. 02-06 November 2011, Honolulu, HI.
- Idol T**, Friday JB, Scowcroft P, Meason D, and Martinez Morales R. Phosphorus nutrition and biogeochemistry in *Acacia koa* forests of Hawaii. Society of American Foresters National Convention. 27-31 October 2010. Albuquerque, NM.
- Friday JB, **Idol TW**, Scowcroft PG, Meason DF, and Martinez Morales R. Carbon sequestration in koa forest restoration. Hawaii Conservation Conference. 28-30 July 2009. Hawaii Conservation Alliance. Honolulu, HI.
- Friday JB, **Idol TW**, Scowcroft PG, Meason DF, and Martinez Morales R. Carbon sequestration in koa forest restoration. Hawaii Conservation Conference. 28-30 July 2009. Hawaii Conservation Alliance. Honolulu, HI.
- Idol TW**, Elevitch C, and Friday JB. Carbon sequestration in agroforestry systems. Hawaii Conservation Conference. 28-30 July 2009. Hawaii Conservation Alliance. Honolulu, HI.
- Martinez-Morales R, **Idol T** and Chen Q. *Acacia koa* forest classification and productivity assessment across environmental gradients in Hawaii using fine resolution remotely sensed imagery. Hawaii Conservation Conference. 28-30 July 2009. Hawaii Conservation Alliance. Honolulu, HI.
- Youkhana A and **Idol TW**. Biomass and soil carbon sequestration in a *Leucaena* agroforestry system in Hawaii. Hawaii Conservation Conference. 28-30 July 2009. Hawaii Conservation Alliance. Honolulu, HI.
- Martinez-Morales R, **Idol T** and Chen Q. *Acacia koa* forest classification and productivity assessment across environmental gradients in Hawaii using fine resolution remotely sensed imagery. American Geophysical Union Joint Assembly, May 23-27, 2009. Toronto, Canada.
- Nazario-Leary C, **Idol TW**, and Ticktin T. Development of a Native Forest Understory Agroforestry System for Restoration, Invasive Species Control and Sustainable Use. International Scientific Conference on Tropical Rainforests and Agroforests under Global Change. 05-09 October 2008. Bali, Indonesia.
- Meason D, Friday JB, **Idol TW**, and Scowcroft P. The Dynamics of Soil Water Content in a Montane Hawaiian *Acacia koa* Forest in Response to Silvicultural Management. 2008 International Meetings of the ASA-CSSA-SSSA. October 04-09, 2008. Houston, TX.
- Youkhana A and **Idol TW**. Tree pruning residues increase soil carbon and nitrogen in shade and full-sun coffee agroecosystems in Hawaii. 2008 International Meetings of the ASA-CSSA-SSSA. October 04-09, 2008. Houston, TX.
- Gautz LD, Steiman SR, Jackson MC, Bittenbender HC, and **Idol TW**. Shade Coffee in Hawaii: Economic Impact of Creating Shade for Culture of Coffee. 22nd International Conference on Coffee Science–ASIC 2008. 14-19 September, 2008. Campinas, SP, Brazil.
- Martinez-Morales R, **Idol T**, Friday JB, and Chen Q. Remote Sensing of *Acacia koa* Forest Growth, Productivity, and Health Across Elevation and Climate Gradients. Hawaii Conservation Conference. July 28-30, 2008. Hawaii Conservation Alliance, Honolulu, HI.
- Nazario-Leary C, **Idol T**, and Ticktin T. Survival, Growth, and Photosynthetic Light Response of a Native Fern, *Microlepia strigosa* (Thumb.) K. Presl, to Varying Understory Light Conditions. Hawaii Conservation Conference. July 28-30, 2008. Hawaii Conservation Alliance, Honolulu, HI.
- Youkhana A and **Idol T**. Tree Pruning Residues Increase Soil Carbon and Nitrogen in Shade and Full-Sun Coffee Agroecosystems in Hawaii. Hawaii Conservation Conference. July 28-30, 2008. Hawaii Conservation Alliance, Honolulu, HI.
- Meason DF, **Idol TW**, Friday JB, and Scowcroft P. Changes In Soil Water And Phosphorus In Response To Thinning, Grass Control, And P Fertilization For *Acacia Koa* In Hawaii: Implications For Developing Management Strategies. North American Forest Soils Conference. June 22-26, 2008. Blacksburg, VA.
- Martinez-Morales R, Miura T, and **Idol T**. An assessment of Hawaiian Dry Forest Condition with Fine Resolution Remote Sensing. February 11-15, 2008. Forest Health Monitoring Working Group Meeting, San Antonio, TX.
- Idol TW**, Steiman S, Bittenbender HC, Gautz L, and Jackson M. Not All Shade is Created Equal: Reflections on Shade Management Based on Preliminary Studies from Hawaii. 2nd International Symposium on Multi-Strata

Agroforestry Systems With Perennial Crops. 17-21 September 2007. Turrialba, Costa Rica.

Idol T. Protocols for improved seedlings for degraded soils. Forestry Short Course, Restoration of Degraded Lands. August 13-17, 2007. US Dept of Agriculture, Forest Service, Institute of Pacific Islands Forestry, Hilo HI.

Meason D, **Idol T**, Friday JB, and Scowcroft PG. Potential mechanisms that limit koa growth and what it could mean for koa forest management-a case study. Hawaii Conservation Conference. July 25-27, 2007. Hawaii Conservation Alliance, Honolulu, HI.

Scowcroft PG, Friday JB, **Idol T**, Dudley N, Meason D, and Hariguchi J. Plantation koa: another inconvenient truth? Hawaii Conservation Conference. July 25-27, 2007. Hawaii Conservation Alliance, Honolulu, HI.

Meason D, Nazario-Leary C, **Idol T**, Friday JB, Scowcroft PG. The strengths and weaknesses of Decagon Devices ECH2O soil moisture probes in two different forest environments in Hawaii. Oral presentation. 2007 Soil Moisture Sensing Technology Conference: current and future research directions in soil moisture sensing.

Idol, T. Where have we been? An overview of current knowledge about the relationship between vegetation and hydrology in Hawaii. *Invited speaker*. 2006 Hawaii Association of Watershed Partnerships Symposium.

Gautz L, Steiman S, **Idol T**, Bittenbender HC. Preliminary Economic Impact of Creating Shade for Culture of Coffee. poster presentation. 2006 ASIC International Coffee Conference.

Steiman S, **Idol T**, Bittenbender HC. The impacts of shade on coffee quality in Hawaii. poster presentation. 2006 ASIC International Coffee Conference.

Steiman S, **Idol T**, Bittenbender HC. Physiological response of coffee to different shading regimes. 2006 ASIC International Coffee Conference.

Steiman S, Jackson M, **Idol T**, Bittenbender HC. Quality determination and group discrimination of shade grown coffee using solid phase microextraction as a means of coffee discrimination. poster presentation. 2006 ASIC International Coffee Conference.

Scowcroft PG, Friday JB, **Idol T**, Dudley N, Haraguchi J, and Meason,D. Targeted silviculture improves koa (*Acacia koa*) tree growth. Oral presentation. 2006 Hawaii Conservation Conference.

Martinez R, Miura T, **Idol T**, and Cordell S. Large-scale assessment of Hawaiian dry forest decline and restoration potential with remote sensing and GIS. Oral presentation. 2006 Hawaii Conservation Conference.

Nazario-Leary C, **Idol T**, and Ticktin T. Development of a Hawaiian agroforestry system to control invasive species and encourage restoration of native biodiversity. Poster presentation. 2006 Hawaii Conservation Conference.

Wong T, and **Idol T.** *Morinda citrifolia* L. (Rubiaceae) growth and light environment in the understory of differing tree species in an agroforestry system, O'ahu, Hawai'i. Poster presentation. 2006 Society for Economic Botany Annual Meeting.

Idol TW and Baker PJ. Canopy and soil N and P in a tropical forest across temperature and precipitation gradients. Poster presentation. 2006 International Meetings of the ASA-CSSA-SSSA.

Meason D, **Idol T**, Friday JB, and Scowcroft P. Sustained increases in soil P availability after fertilization in a tropical Hapludand forest soil. 2006 International Meetings of the ASACSSA- SSSA.

Invited Seminars

Idol, T. 2018. Propagating a Sustainable Future for Hawaii's Forests and Agroforests. UH-Manoa Department of Natural Resources and Environmental Management seminar series.

Idol, T. 2018. Agroforestry and hydrology: recharge-ing our watersheds? Hawaii's Freshwater Initiative, Water Recharge Breakfast.

Idol, T. 2017. Phosphorus nutrition and biogeochemistry in *Acacia koa* forests of Hawaii. UH-Manoa, Department of Geology & Geophysics TGIF seminar series.

Friday JB, **T Idol**, P Scowcroft, J Leary, N Koch. 2016. Large scale restoration of koa forests. UH-Manoa Department of Natural Resources and Environmental Management seminar series.

Bittenbender HC and **T Idol**. 2015. Research and development of improved cocoa varieties and agroecosystem

management in Hawaii. Crop Science Cluster, 9th Anniversary Celebration. University of the Philippines, Los Baños.

Idol T. Conservation agriculture production systems (CAPS): building resilience into smallholder agriculture. Fall 2013 seminar series. UH-Manoa, Water Resources Research Center.

Idol T, Friday JB, Scowcroft P, Meason D, and Martinez Morales R. Phosphorus nutrition and biogeochemistry in *Acacia koa* forests of Hawaii. Spring 2011 Ecology, Evolution, and Conservation Biology Evoluncheon Series.

Idol T, Ticktin T, Nazario-Leary C, and Wong T. Restoration Agroforestry: Opportunities for Hawaii. Spring 2008. Ecology, Evolution, and Conservation Biology Evoluncheon Series.