

Chin-Ling Lee

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EDUCATION

Doctor of Philosophy, Texas A&M University, College Station, Texas May 11, 2023

Department of Agricultural Leadership, Education, and Communications

Dissertation Title: *Factors Influencing Agricultural Extension Agents' and Specialists' Adoption of and Intention to Promote Precision Agriculture Technologies*

Master of Science, National Taiwan University, Taipei, Taiwan June 2001

Department of Forestry

Bachelor of Science in Agriculture, National Taiwan University, Taipei, Taiwan June 1999

Department of Forestry, Forest Resources Conservation Division

PROFESSIONAL EXPERIENCE

Department of Psychological and Brain Sciences, Texas A&M University, College Station, TX

Graduate Research Assistant Jan. 2022 – Aug. 2022

- Transcription of interview data.
- Qualitative analysis of data in Mandarin and English.
- Meeting with collaborators for coding of data.
- Mentoring undergraduate students.
- Coding data on the Dedoose software.

Taoyuan District Agricultural Research and Extension Station, Council of Agriculture, Executive Yuan, Taoyuan, Taiwan.

Assistant Researcher May 2012 – present

- Running Research Projects in Agricultural Management Field.
- Assisting young farmers who joined the Young Farmers' One-on-One Guidance Training Program to develop professional know-how.
- Executing Innovative Advanced Program of government services to improve the service process for the farmers and consumers of the organization.
- Managing and promoting the research results (Intellectual Property Rights) of the agricultural research and development of the organization.
- Assisting local farmer associations, agricultural production, and marketing groups, home economics groups, etc., to enhance the ability of the marketing skills of farm produce and processing products.

Chiayi Forest District Office, Forest Bureau, Council of Agriculture, Executive Yuan,
Chiayi, Taiwan.

Associate Technical Specialist

Oct. 2009 – May 2012

- In charge of 3 nurseries and handled seedling growth and distribution to keep up with the afforestation schedule of the Bureau.
- Handling Community Green Landscaping Program.

Experimental Forest, National Taiwan University, Nantou, Taiwan.

Research Assistant

Dec. 2002 – Oct. 2009

- Running research projects in the Forestry field.
- Teaching interns were taking the internship program of Forestry of National Taiwan University.
- Taking an interpretation position for scholars from abroad.
- Organizing internal and international symposia, exhibitions, and forest festivals.

Institute of Plant Biology, National Taiwan University, Taipei, Taiwan.

Graduate Research Assistant

Dec. 2001 – Dec. 2002

- Collecting plant samples from fields.
- Processing samples in the lab for running the transmission electron microscope and the scanning electron microscope.
- Mentoring undergraduate students.

AWARDS / HONORS

I have received ten awards. Eight of those awards were scholarly and academic achievements. Also, I have earned two best employee awards.

International

2023 A Travel Fund to attend the 2023 Conference of the Association for International Agricultural and Extension Education by the Department of Agricultural Leadership, Education, and Communications at Texas A&M University.

2022 Distinguished Student Oral Presentation Award at the Association for International Agricultural and Extension Education conference in Thessaloniki, Greece.

2022 A Travel Fund to attend the 2022 Conference of the Association for International Agricultural and Extension Education by the Department of Agricultural Leadership, Education, and Communications at Texas A&M University.

2019 A 3-year Scholarship by Agricultural Elitist Training Project, Council of Agriculture of Executive Yuan, Taiwan.

2016 Best Employee Award, Taoyuan District Agricultural Research and Extension Station of Council of Agriculture, Executive Yuan, Taiwan.

2007 Best Employee Award, Experimental Forest of National Taiwan University, Taiwan.

1997 Zhouzhen Scholarship, Agricultural Association of Taiwan

National

2023 First Place Winner of People's Choice Research Poster at the 2023 American Association for Agricultural Education Conference.

2022 Outstanding Doctoral Student Award in the Department of Agricultural Leadership,

Education, and Communications from the Texas A&M University Chapter of Gamma Sigma Delta, the International Honor Society of Agriculture, United States.
2021 Outstanding Achievement Award, Texas A&M University's 2021 Student Research Week.

PUBLICATIONS

I have published 22 refereed journal articles in seven journals and have presented 18 scholarly works at international, national, and state research conferences.

Refereed Journal Articles

- . Lee, C.-L., Strong, R., Briers, G., Murphrey, T., Rajan, N., & Rampold, S. (In review). Factors predicting innovation-decisions: The effects of performance expectancy, social influence, and facilitating conditions on U.S. Extension's promotion of precision agriculture technologies. *NJAS: Impact in Agricultural and Life Sciences*. (2.4^{Impact Factor})
- . Lee, C.-L., Strong, R., Briers, G., Murphrey, T., & Rajan, N. (In review). Enhancing the adoption of sustainable practices: Predictor variables affecting agricultural professionals in promoting precision agriculture technologies. *The Journal of Agricultural Education & Extension*. (2.8^{Impact Factor})
23. Strong, R., Sprayberry, S., Dooley, K., Ahn, J., Richards, J., Kinsella, J., Lee, C.-L., Ray, N., Cardey, S., Benson, C., & Ettekal, A. (2023). Sustaining global food systems with youth digital livestock production curricula interventions and adoption to professionally develop agents of change. *Sustainability*, 15(18), 13896. <http://doi.org/10.3390/su151813896> (3.9^{Impact Factor})
22. Liu, J., Lee, C.-L., & Midgette, A. (2023). If it Bothers Someone it's a Mistake! How Chinese College Students Conceptualize Transgressions. *Emerging Adulthood*, <https://doi.org/10.1177/21676968231192137> (2.6^{Impact Factor})
21. Lee, C.-L., Strong, R., Briers, G., Murphrey, T., Rajan, N., & Rampold, S. (2023). A correlational study of two U.S. State Extension professionals' behavioral intentions to improve sustainable food chains through precision-farming practices. *Foods*, 12, 2208. <https://doi.org/10.3390/foods12112208> (5.561^{Impact Factor})
20. Lee, C.-L., Strong, R., & Dooley, K. E. (2021). Analyzing precision agriculture adoption across the globe: A systematic review of scholarship from 1999–2020. *Sustainability*, 13(18), 1–15. <https://doi.org/10.3390/su131810295> (3.889^{Impact Factor})
19. Fu, C.-L., Chang, C.-C., & Lee, C.-L. (2018). Explore the Critical Success Factors for Young Farmers into the Industry of Vegetables - A case study to young farmers in Taoyuan City. *Bulletin of Taoyuan District Agricultural Research and Extension Station*, 84, 39–52. https://www.tydares.gov.tw/upload/tydares/files/web_structure/6324/84-4.pdf
18. Lee, C.-L. (2018). Economic benefit analysis of facility agriculture: The case of organic short-term leafy vegetables in the northern region of Taiwan. *Bulletin of Taoyuan District Agricultural Research and Extension Station*, 83, 52–64. https://www.tydares.gov.tw/upload/tydares/files/web_structure/6324/83-4.pdf
17. Fu, C.-L., Chang, C.-C., Lee, C.-L., & Lay S.-J. (2017). A study on the vegetable business management and counseling of young farmers in northern Taiwan. *Bulletin of Taoyuan District Agricultural Research and Extension Station*, 81, 61–76.

- <https://www.airitilibrary.com/Publication/alDetailedMesh?docid=02575523-201706-201805150012-201805150012-61-76>
16. Lee, C.-L., Lee, T.-H., & Jiang, J.-L. (2013). Revenue analysis of Guanyin Township lotus farm in Taoyuan County operated by production mode. *Bulletin of Taoyuan District Agricultural Research and Extension Station*, 74, 53–60.
https://www.tydares.gov.tw/upload/tydares/files/web_structure/4264/73-5.pdf
 15. Lee, T.-H., Lee, C.-L., & Lay, S.-J. (2013). Study on the satisfaction of tourist experience and package tour in relation to loyalty of leisure farm customers: A case study of Yuanying leisure in Guanyin Township, Taoyuan. *Bulletin of Taoyuan District Agricultural Research and Extension Station*, 74, 65–79.
https://www.tydares.gov.tw/upload/tydares/files/web_structure/4818/74-5.pdf
 14. Wei, C., Lee, C.-L., Tian, P.-L., Liao, H.-C., Huang, Y.-R., Tseng, Y.-S., Lai, J.-R., & Shen, C.-W. (2011). Study on the change of landscape and ecology using remotely sensed and ecological investigation data. *Quarterly Journal of Chinese Forestry*, 44(3), 445–466. <https://doi.org/10.30064/qjcf.201109.0011>
 13. Chen, H.-T., Lee, C.-L., Cheng, C.-T., & Lu, F.-Y. (2009). Vegetation at Bei Yu Shan of Salisen stream, central Taiwan. *Quarterly Journal of Chinese Forestry*, 42(1), 1–22.
<https://doi.org/10.30064/qjcf.200903.0001>
 12. Chen, T.-L., Wey, T.-H., Lee, C.-L., & Lu, F.-Y. (2009). Comparison of the natural and artificial regeneration in landslide areas caused by an earthquake in the Chaoling region, Central Taiwan. *Journal of Chinese Soil and Water Conservation*, 40(1), 49–65.
<https://core.ac.uk/download/pdf/41693992.pdf>
 11. Wei, C., Lin, F.-C., Lee, C.-L., Tseng, Y.-S., & Chien, Y.-J. (2008). Assessing wooden material application in ecological engineering methods in Taiwan. *Journal of Ecotechnology*, 4(1), 20–42. <https://doi.org/10.29769/je.200806.0005>
 10. Chen, D.-R., Lee, C.-L., Hsu, P.-H., Chen, H.-T., Hsue, Y.-L., & Lu, F.-Y. (2007). Vegetation of *Alnus Formosana* forest in the *Machilus-Castanopsis* Zone in Salisen area, the Experimental Forest of National Taiwan University. *Quarterly Journal of Chinese Forestry*, 40(2), 165–183. <https://doi.org/10.30064/qjcf.200706.0002>
 9. Wei, C., Lee, C.-L., Hsieh H.-I., Huang, Y.-R., Tseng, Y.-S., & Shen C.-W. (2007). Preliminary study on the change of landscape and ecology in Sitou tract of NTU Experimental Forest. *Journal of Ecotechnology*, 3(1), 21–43.
<https://doi.org/10.29769/je.200706.0005>
 8. Chen, S.-H., Chung, N.-J., Wang, Y.-N., Lee, C.-L., Lee, Y.-L., & Tsai, P.-F. (2006). Study of male sterility in *Taiwania cryptomerioides* Hayata (Taxodiaceae). *Protoplasma*, 228, 137–144. <https://doi.org/10.1007/s00709-006-0166-2> (1.333^{Impact Factor})
 7. Hsieh, H.-I., Lee, C.-L., Huang, Y.-R., & Yuan, H.-W. (2006). Species diversity of wildlife at Feng Haung nature education area. *Journal of the Experimental Forest of National Taiwan University*, 20(2), 87–97.
<http://ntur.lib.ntu.edu.tw/bitstream/246246/177417/1/12.pdf>
 6. Hsu, P.-H., Lee, C.-L., Chen, D.-R., Liou, F.-Y., & Chen, C.-M. (2006). Vegetation at the watershed of Tonqui stream. *Quarterly Journal of Chinese Forestry*, 39(2), 147–162.
<https://doi.org/10.30064/qjcf.200606.0001>
 5. Lee, C.-L., Huang, Y.-R., Shen C.-W., & Liu, W.-S. (2006). Study on the recovery of understory vegetation of *Cryptomeria japonica* plantations in Xitou, Central Taiwan. *Journal of the Experimental Forest of National Taiwan University*, 20(4), 299–307.

- [https://doi.org/10.6542/efntu.200612_20\(4\).0006](https://doi.org/10.6542/efntu.200612_20(4).0006)
4. Chan, M.-H., Che, J.-H., Yang, T.-H., Wang, S.-Y., Tseng, Y.-S., Hun, C.-P., & Lee, C.-L. (2005). Evaluating the properties planted trees of by using ultrasonic wave testing. *Quarterly Journal of Chinese Forestry*, 38(4), 485–496. <https://doi.org/10.30064/qjcf.200512.0009>
 3. Lu, E.-Y., Chu, P.-C., Lu, Y.-Y., Lee, C.-Y., Hsu, K.-Y., Peng, J.-Y., & Lee, C.-L. (2005). Characteristics of colonizers on the landslide of Xitou, Experimental Forest, National Taiwan Forest. *Journal of the Experimental Forest of National Taiwan University*, 19(3), 231–236. [https://doi.org/10.6542/efntu.200509_19\(3\).0005](https://doi.org/10.6542/efntu.200509_19(3).0005)
 2. Wang, Y.-N., Hsiao, W.-W., Lin, R.-J., Sen, J.-W., Lee, C.-L., & Huang, S.-L. (2004). The study of pathogenicity of *Ophiostoma quercii* to six conifer tree seedlings and Chinese fir. *Journal of the Experimental Forest of National Taiwan University*, 18(1), 9–12. [https://doi.org/10.6542/efntu.200403_18\(1\).0002](https://doi.org/10.6542/efntu.200403_18(1).0002)
 1. Lee, C.-L., Ying, S.-S., & Zhong, N.-J. (2001). Study on vegetation colonization of landslides in Chao Ling, Central Taiwan. *Quarterly Journal of Chinese Forestry*, 34(4), 377–392.

CONFERENCE PRESENTATIONS

Refereed Abstract Presentations

8. Lee, C.-L., Strong, R., Fensel, A., Ingram, J., Ahmed, A. A., Lu, P., & Ahn, J. (will be presented on 2024, April 15-17). *Advancing the Symbiosis and Synergy of Research and Extension: Transforming Food Systems' Efficiency and Sustainability with Predictive AI Dissemination*. 2024 AI in Agriculture and Natural Resources Conference, College Station, Texas, United States.
7. Strong, R., Lee, C.-L., Harder, A., Linder, J., & Roberts, G. (will be presented on 2024, April 9-12). *Are agricultural change agents best prepared to diffuse climate smart agriculture technologies?: A factor analysis highlighting professional development opportunities*. The 5th Global Food Security Conference, KU Leuven, Belgium.
6. Strong, R., Lee, C.-L., Palmar, K., & Conser, K. (2023, May 3-4). *Transformational learning results and student recruiting from virtual reality interventions: The relevance, opportunities, and influences of research informing pedagogy*. Texas A&M University 2023 Transformational Teaching and Learning Conference, College Station, TX, United States.
5. Lee, C.-L., Strong, R., Briers, G., Murphrey, T., & Rajan, N. (2023, April 26–29). *Promoting Precision Agriculture Technologies: Enhancing Capacity of Extension Personnel*. Association for International Agricultural and Extension Education Conference, Guelph, Canada.
4. Lee, C.-L., Strong, R., Briers, G., Murphrey, T., & Rajan, N. (2023, April 26–29). *Evaluating self-efficacy's effect on extension agents' intentions to promote precision agriculture technologies for farmer adoption*. Association for International Agricultural and Extension Education Conference, Guelph, Canada.
3. Strong, R., Mulkerrins, M., & Lee, C.-L. (2023, April 26–29). *Are Students Developed to Lead Change and Promote Innovation Adoption? Evaluating Change Agent Efficacy with Contentious Issues*. Association for International Agricultural and Extension Education Conference, Guelph, Canada.
2. Midgette, A., Lee, C.-L., Yeh, S.Y., & Liu, J. (2022, July). *If it Bothers Someone It's a*

Mistake! How Chinese College Students Conceptualize Transgressions. Association for Moral Education Conference, Manchester, UK.

1. Lee, C.-L., & Strong, R. (2022, April 4–7). *The neglect of marginalized farmers in the innovation-decision process: Precision agriculture adoption attributes for smallholder farmers*. Association for International Agricultural and Extension Education Conference, Thessaloniki, Greece.

Refereed Manuscript Presentation

4. Wei, C., Lee, C.-L., Liao, H.-C., Tian, P.-L., Huang, Y.-R., Tseng, Y.-S., Lai, J.-R., & Shen, C.-W. (2008). *Study on the change of landscape and ecology using remotely sensed and ecological investigation data*. Research on Mountain Disasters and Environmental Protection Across Taiwan Strait Symposium. Taichung City, Taiwan.
3. Wei, C., Wang, S.-Y., Hung, C.-P., Lin, F.-C., Jian, Y.-R., Lee, C.-L., Tseng, Y.-S., & Lai, J.-R. (2008). *Assessment and monitoring of using wooden material on ecological engineering techniques in Taiwan*. The 17th Hydraulic Engineering Symposium, Taichung City, Taiwan.
2. Chen, S.-H., Chung, N.-J., Wang, Y.-N., Lee, C.-L., Lee, Y.-L., & Tsai, P.-F. (2007). *Pollen development of *Taiwania cryptomerioides* Hay*. International Symposium on *Taiwania cryptomerioides*, Nantou County, Taiwan ◦
1. Chen, S.-H., Chung, N.-J., Wang, Y.-N., Lee, C.-L., & Lee, Y.-L. (2004). *Study of male sterility in *Taiwania cryptomerioides* Hayata*. International Palynological Congress, Granada, Spain.

Referred Poster Presentation

3. Strong, R., Fensel, A., Athanasiadis, I., Abdelmoamen, A., Lee, C.-L., Lu, P. & Ahn, J. (2024, February 9). *Climate smart agriculture translational research advancement: The impact of predictive AI data competencies in disseminating innovations*. 2024 Data-driven Intelligent Agricultural Systems Symposium, College Station, TX, United States.
2. Lee, C.-L., Strong, R., Briers, G., & Murphrey, T. (2023, May 15-18). *Is cooperative Extension prepared to promote precision agriculture technologies?* 2023 American Association for Agricultural Education National Conference, Raleigh, NC, United States.
1. Lee, C.-L., Strong, R., & Murphrey, T. (2022, September 19–21). *Promoting climate-smart agricultural technologies: Extension and behavioral intention*. 2022 Western Region American Association for Agricultural Education Conference, Las Cruces, TX, United States.

Refereed Conference Session

1. Lee, C.-L., Mulkerrins, M., & Strong, R. (2022, April 4–7). *Transdisciplinary Strategies to assess food and agriculture's impact on public health*. Association for International Agricultural and Extension Education Conference, Thessaloniki, Greece.

Oral Presentations

4. Lee, C.-L., & Strong, R. (2023, March 20). *Enhancing Change Agents Competencies in Translating Climate Smart Agriculture Technologies Research to Stakeholders*. Texas A&M University 2023 Student Research Week, College Station, TX, United States.

3. Lee, C-L., & Strong, R. (2022, March 20). *The neglect of marginalized farmers in the innovation-decision process: Precision agriculture adoption attributes for smallholder farmers*. Texas A&M University 2022 Student Research Week, College Station, TX, United States.
2. Lee, C-L., & Strong, R. (2022, March 3–4). *Enhancing sustainability and reducing poverty: Improving innovation access for marginalized smallholder farmers*. Texas A&M University System Pathway Student Symposium, College Station, TX, United States.
1. Lee, C-L., & Strong, R. (2021, March 29–April 2). *Precision agriculture adoption benefits: A synthesis of literature from 1999-2020*. Texas A&M University Student Research Week, College Station, TX, United States.

Invited Seminars

1. Strong, R., Palmer, K., Lee, C-L., & Conser, K. (March 30, 2023). *Adopting Virtual Reality to Transform Learning in the Food and Agricultural Sciences*. This face-to-face seminar was presented to 103 Texas youth during the Texas A&M University College of Agriculture and Life Sciences' 4-H Day. College Station, TX., USA.

COMPLETED INTERNATIONAL RESEARCH GRANTS

- 2014-2015 Chung Cheng Agriculture Science and Social Welfare Foundation, Taiwan, "Stabilize the organic vegetable production system and establish a logistics e-Platform for organic vegetables in the northern metropolitan suburbs in Taiwan." (\$64,516)
- 2015 Taiwan Council of Agriculture, "Study on the Business Models of Potential Agricultural Products in Taiwan" (\$25,806) - Co-Principal Investigator (Principal Investigator: Hung Ying Yang)

TEACHING EXPERIENCE

Department of Agricultural Leadership, Education, and Communications, Texas A&M University, College Station, Texas, United States.

- Guest Instructor** September 7th, 2022
 - 2022 ALEC 640 Method of Technology Change
- Invited Research Poster Presenter** September 14th, 2022
 - 2022 ALEC 640 Method of Technology Change

Experimental Forest, National Taiwan University, Nantou, Taiwan.

- Instructor** Dec. 2002 – Oct. 2009
 - Undergraduate Course Taught: Forestry field practice internship program in Summer and Spring terms.

SERVICES

- 2019 Taoyuan District Agricultural Research and Extension Station 4-Year Performance Self-Evaluation Team.
- 2018 Consultant, Young Farmers' One-on-One Guidance Training Team.
- 2015 Taoyuan District Agricultural Research and Extension Station Staff Performance Appraisal Committee.
- 2014-2019 Coordinator, Taoyuan District Agricultural Research and Extension Station Research and Development Achievement Management Committee.

- 2007 Coordinator, International Symposium on *Taiwania cryptomerioides*.
2005 Experimental Forest Management Planning Team.
2003-2009 Editorial Assistant, Journal of the Experimental Forest of National Taiwan University
2003 Coordinator, 2nd Symposium on Asian University Forests.
1996 Secretary Executive, National Taiwan University Forestry Student Association.

QUALIFICATIONS

- 2022 Received a Certificate in Agricultural E-Learning Development from the Texas A&M University Department of Agricultural Leadership, Education and Communication.
2022 Received a Certificate in Extension Education from the Texas A&M University Department of Agricultural Leadership, Education and Communication.
2016 Certified has completed seven courses in Basic IPR Knowledge by Taiwan Intellectual Property Office.
2016 Certified has completed seven courses in Process Control for Patent Engineer by Taiwan Intellectual Property Office.
2012 Certified Agricultural Specialist by Ministry of Examination, Taiwan.
2002 Certified Forestry Specialist by Ministry of Examination, Taiwan.