

Eric François Hequet

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**Horn Distinguished Professor - Fiber and Biopolymer Research Institute
Plant and Soil Science Department
Associate Vice President for Research
Office of Research and Innovation**

I am Paul Whitfield Horn Distinguished Professor at the Fiber and Biopolymer Research Institute in the Department of Plant and Soil Science at Texas Tech University (TTU), and Associate Vice President for Research in the Office of Research and Innovation. I hold a Ph.D. and a “Habilitation à Diriger des Recherches” from the University of Haute Alsace in France (must have this diploma to be full professor in Europe). Before joining TTU, my experience progressed from cotton breeding at experiment stations in Africa, to head of CIRAD’s Cotton Technology Laboratory in Montpellier - France, to Director of the international cotton program for CIRAD.

I generated 112 refereed journal publications, 2 books, 9 book chapters, more than 260 conference papers, 3 patents, 3 provisional patent, and 1 invention disclosure. My h-index is 18 based on Web of Knowledge (<http://www.researcherid.com/rid/A-9802-2008>). One hundred and two articles have citation data and have been cited 1,250 times. My h-index is 28 based on Google Scholar with 3201 citations

(http://scholar.google.com/citations?hl=en&user=BSfIoYsAAAAJ&view_op=list_works&gmla=AJsN-

[F5c3aDH2N82u0rk8_DAw2STXer0DMGOxTK_HH_ppvAd6R5iIXOi3FuGNPYdli5zhqVU4Pco_56fssjGCX0iG2ucO7QLLb51BARaf0R1w5NEUvYS81tDXrtVKCuxm8j8ytQw0cIA](http://scholar.google.com/citations?hl=en&user=BSfIoYsAAAAJ&view_op=list_works&gmla=AJsN-F5c3aDH2N82u0rk8_DAw2STXer0DMGOxTK_HH_ppvAd6R5iIXOi3FuGNPYdli5zhqVU4Pco_56fssjGCX0iG2ucO7QLLb51BARaf0R1w5NEUvYS81tDXrtVKCuxm8j8ytQw0cIA)). My

RG score based on Research Gate is 35.31 with 2,106 citations and my h-index is 24

(https://www.researchgate.net/profile/Eric_Hequet).

Since many years, I have provided international leadership in research on the measurement of cotton fiber properties and contaminants, including the impacts of these on textile processing performance. I am currently focused on collaborative research with the cotton breeding and cotton biotechnology community to develop improved properties in cotton fibers.

I have been PI or Co-PI on 10 funded projects during the period 1992-1997 in France, totaling \$2,348,896. I joined Texas Tech University in November 1997, since this date I have been PI or Co-PI on more than 250 funded projects totaling \$35,566,311 (\$12,772,529 credited to me at TTU). I am teaching the following graduate courses, “Advanced Studies in Cotton Fibers” at Texas Tech University and Texas A&M University, and “US and Global Cotton Fiber – Textile Industries” and “Seminar” at Texas Tech University. I am member of the International Committee on Testing Methods, International Textile Manufacturers Federation (ITMF), American Society for Testing and Materials (ASTM), American Association of Textile Chemists and Colorists

(AATCC), Society of Photo-Optical Instrumentation Engineers (SPIE), American Association for the Advancement of Science (AAAS), Committee on Cotton Quality Measurements (United States Department of Agriculture), the Fiber Society, the Association for the Advancement of Industrial Crops, (AAIC), the American Society of Agronomy (ASA), and senior member of the National Academy of Inventors. I am member of the Editorial Board of the Journal of Cotton Science, Vice Chair of the Editorial Board and Senior Editor of the Journal of Cotton Research, and manuscript reviewer for Textile Research Journal, Transactions of the ASAE (American Society of Agricultural Engineers), Journal of Electronic Imaging, Agronomy Journal, Journal of Engineered Fibers and Fabrics, Journal of the Textile Institute, Journal of Industrial Textiles, and Crop Science.

Education:

- H.D.R. (Habilitation à diriger des recherches, required diploma to be full Professor in Europe) in Engineering Sciences, Université de Haute Alsace (France), December 2004.
- Ph.D. in Engineering Sciences, Université de Haute Alsace (France), October 2003.
- DEA (Diploma of Applied Advanced Studies) in Plants Genetics, Orsay, Paris XI (France), 1982.
- Maîtrise (Master of Sciences) in Genetics, Orsay, Paris XI (France), 1980.
- DEUG G (Diploma of Higher Education) in Chemistry-Physiology, Orsay, Paris XI (France), 1978.

Languages:

- French native language
- English fluent
- Spanish read

Professional Experience:

- Sept. 2020-Present : Associate Vice President for Research
Office of Research and Innovation
Texas Tech University, Lubbock, TX.
- Jan. 2020-Present : Executive Director Natural Fibers Research Initiatives
Office of Research and Innovation
Texas Tech University, Lubbock, TX.
- Feb. 2016-Present : Horn Distinguished Professor
Texas Tech University, Lubbock, TX.
- Sept. 2014-Aug. 2019 : Department Chair, Plant and Soil Science,
Texas Tech University, Lubbock, TX.
- Sept. 2011-Present : Professor, Plant and Soil Science,
Texas Tech University, Lubbock, TX.

- Sept. 2008-Aug. 2011 : Associate Professor, Plant and Soil Science,
Texas Tech University, Lubbock, TX.
- Sept. 2006-Aug. 2008 : Research Associate Professor, Plant and Soil Science,
Texas Tech University, Lubbock, TX.
- Dec. 2004-Present : Member Graduate Faculty
Haute-Alsace University, France
- Dec. 2003-Present : Member Graduate Faculty
Texas A&M University
- July 2002-Aug. 2014 : Associate Director, Fiber and Biopolymer Research Institute
(previously known as International Textile Center)
Texas Tech University, Lubbock, TX
(Joint appointment Texas Tech University (75%) –
Texas A&M AgriLife Research (25%) since Sept. 2003).
- Sept. 1999-Present : Member Graduate Faculty
Plant and Soil Sciences Department – Texas Tech
University, Lubbock, TX.
- Nov. 1997-June 2002 : Assistant Director, International Textile Center
Texas Tech University, Lubbock, TX.
- Dec. 1996-Oct. 1997 : Head of the Cotton Program, CIRAD-CA, Montpellier,
France.
- Nov. 1992-Nov. 1996 : Head of the Cotton Technology Laboratory,
CIRAD-CA Montpellier, France.
- Dec. 1990-Nov. 1992 : Associate Head of the Cotton Technology Laboratory,
IRCT then CIRAD-CA, Montpellier, France.
- March 1988-Dec. 1990 : Associate Head of the Cotton Technology Laboratory
IRCT (France) and Head of the Cotton Technology Laboratory,
IRCT, N'Djamena, Chad.
- June 1986-March 1988 : Head of the Bebedjia Agronomic Research Station and
Head of Cotton Breeding Program and Head of the Cotton
Technology Laboratory, IRCT, Bebedjia, Chad.
- March 1985-June 1986 : Head of Cotton Breeding Program and Head of the Cotton
Technology Laboratory, IRCT, Bebedjia, Chad.

Nov. 1982-March 1985 : Head of Cotton Breeding Program and Head of the Cotton Technology Laboratory, IRCT, Bebedjia, Chad.

International Experience:

- Many short (1 week-1 month) expert missions in Tropical Africa (Chad, Togo, Madagascar, Ivory Coast, Cameroon, Benin, Ethiopia, and Sudan), Asia (Thailand, Uzbekistan, Turkmenistan, India, and China), South America (Brazil, Columbia, Ecuador, and Nicaragua) on cotton breeding, cotton technology, and cotton production economics.

Academic Teaching Experience:

- “Superior specialization course on cotton fiber technology”: 16 hours. Taught twice. Sevilla University - Agricultural Research and Development Center «Las Torres-Tomejil» Alcala del rio (Spain). Two book chapters were produced :
 1. **Hequet, E.** 1998. Determinacion de la calidad del algodon. *In: Tecnologia de la fibra de algodon. Direccion General de Investigacion y Formacion Agraria Servicio de Publicaciones y Divulgation. Cursos Superiores 3/98. I.S.B.N. 84-89802-39-4. p. 279-330*
 2. **Hequet, E.** 1998. Contaminacion por pegajosidad. *In: Tecnologia de la fibra de algodon. Direccion General de Investigacion y Formacion Agraria Servicio de Publicaciones y Divulgation. Cursos Superiores 3/98. I.S.B.N. 84-89802-39-4. p. 341-358*
- “Advanced Studies in Cotton Fibers” (3 credits). Taught eleven times at Texas Tech University (PSS 5001 Spring 2000 – PSS 5376 Fall 2002, Fall 2004, Fall 2006, Fall 2008, Spring 2010, Fall 2011, Spring 2013, Fall 2014, Spring 2016, and Fall 2017) and ten times at Texas A&M University (AGRO 689 Fall 2002, Fall 2004, Fall 2006, and Fall 2008; SCSC 646 Spring 2010, Fall 2011, Spring 2013, Fall 2014, Spring 2016, Fall 2017, Fall 2019).
- “US and Global Cotton Fiber – Textile Industries” (3 credits – Team taught 33% credit to Hequet). Taught 18 times at Texas Tech University (PSS 5270, then 5370).
- “Cotton Fiber: Genotype to Phenotype Characterization” (3 credits PSS 5377 – Team taught 25% credit to Hequet). Taught once at Texas Tech University (Spring 2007).
- “Graduate Seminar” (1 credit - PSS 5100). Taught fifteen times at Texas Tech University (Fall 2010, Spring 2011, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Fall 2013, Spring 2014, Fall 2014, Spring 2015, Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020).

Professional Teaching Experience:

- Relationship ginning – fiber quality at the Gin School organized by the USDA Gin Lab (once a year)
- Relationship humidification at the gin – fiber quality at the Samuel Jackson School. Class taught 3 times.
- Fiber Properties Seminar for several companies (16 hours per session). Class taught 4 times

Graduate Committees completed:

1. Omar Tamine, Etude de la précision et de la répétabilité des mesures du collage du coton sur le thermodétecteur SCT, DEA, July 1997, Haute Alsace University, France.
2. Mourad Krifa, Contribution à l'étude des fragments de coques de graines sur la qualité du fil de coton, DEA, July 1997, Haute Alsace University, France.
3. Yongmei Dai, Automatic Fabric Dimensional Distortion Measurement and Wrinkle Evaluation, Master, May 2002, Texas Tech University, U.S.A.
4. Aijun Zhu, Fabric wrinkle evaluation, Master, May 2002, Texas Tech University, U.S.A.
5. Ajay Pai, X-ray microtomographic image analysis for identification of cotton contaminants, Master, August 2002, Texas Tech University, U.S.A.
6. Christopher N. Turner, Automatic assessment of smoothness grading for fabrics using a laser-based vision system, Master, May 2003, Texas Tech University, U.S.A.
7. Carl Speck, Relative contribution of insect and plant sugars to cotton fiber stickiness, Master, May 2003, Texas Tech University, U.S.A.
8. Leigh Crammer, A Better Understanding of the Number of Fibers per Seed in Cotton, Master, June 2004, Texas Tech University, U.S.A.
9. Mark Shelton Kelley, Field weathering effects on stripper harvested cotton in the Texas High Plains, Ph.D., March 2006, Texas Tech University.
10. Carol Mason Kelly, Evaluation of yield and fiber trait responses across irrigation treatments, Master, June 2006, Texas Tech University.
11. Amara Asma, ENSITM, Contribution à l'étude de l'adhésion des miellats du coton. Ph.D., December 2006. Haute-Alsace University, France.

12. Wan Huapeng, Fiber property characterization by image processing, Master, March, 2007, Texas Tech University.
13. Sridharan Kamalakannan. Energy-based Deformable Contours in Computer Vision: Recent Advances and Customization for Two Applications. Master. June 2007. Texas Tech University.
14. Narjes Rjiba. Fibre de coton: microstructure et propriétés de surface. Ph.D., June 2007, Haute-Alsace University, France.
15. Neha Kothari. Multi-Disciplinary Approach to Study Cotton Fiber Development. Master. December 2007. Interdisciplinary Studies. Texas Tech University.
16. Shahram Nowrouzieh. Etude des phénomènes de cohésion et de friction inter fibres : cas du coton. Ph.D., December 2007, Haute-Alsace University, France.
17. Brock Faulkner. Comparison of picker and stripper harvesters on irrigated cotton on the High Plains of Texas. Ph.D., May 2008. Texas A&M University.
18. Lu Feng. Variability of fiber quality within a plant. Master. October 2008. Texas Tech University.
19. Houda Benzina, Micro structure du coton. Ph.D., December 2008. Haute-Alsace University, France.
20. Erik Everett, Stability of cotton varieties over eighteen environments. Master, May 2009. Texas Tech University.
21. Raina King, Structural analysis and basic inheritance characterization of the caduceus bract trait of Gossypium, Master. May 2009. Texas Tech University.
22. Margaret Shields, The evaluation and inheritance of several traits associated with lint percent in cotton, Ph.D., December 2010, Texas Tech University.
23. Jason Sneed, Irrigation Termination to Improve Fiber Maturity on the Texas High Plains, M.S. June 2010, Texas Tech University.
24. Shail Shah, Cellulose-based aerogels. M.S. August 2011, Texas Tech University.
25. Matthew Stroud, An Evaluation of Lint Yield, Fiber Quality, and an Economic Analysis of Upland Cotton Cultivars. M.S. Spring 2011, Texas Tech University.
26. Luis Cabrales, Analytical and Spectroscopic Approaches to Study Cellulose Macromolecules in Developing Cotton Fibers. Ph.D. Fall 2011, Plant and Soil Sciences, Texas Tech University.

27. Payam Aminayi, Imparting super hydro/oleophobic properties to cotton fabric by means of molecular and nanoparticles vapor deposition methods. M.S. August 2011, Texas Tech University.
28. Neha Khotari, Improvement of Cotton Fiber Maturity and Assessment of Intra-Plant Fiber Variability. Ph.D. Spring 2012, Texas A&M University
29. Benjamin Michael Beyer, Genetic Improvement of Upper Half Mean Length and Short Fiber Content in Upland Cotton, *Gossypium hirsutum*. Ph.D. Summer 2012. Texas A&M University
30. Heath Reeves, Effects of Irrigation Termination Date on Cotton Yield and Fiber Quality. M.S. Spring 2012, Texas Tech University.
31. Melissa Muharam, Nitrogen Nutrition Estimation of Cotton Fields Using Greenness and Ground Cover Parameter. Ph.D. Summer 2012. Texas Tech University.
32. Sanjit Acharya, Cationization of Cotton Fabric for Improved Dye Uptake. MS, Summer 2012. Texas Tech University
33. Sridharan Kamalakannan, Ph.D., Fall 2012. Automatic and Interactive Energy Minimization Schemes. Electrical Engineering, Texas Tech University
34. Fulvio Simao, Ph.D., Spring 2013. The Effects of Varying Levels of Deficit Irrigation and Episodic Drought Stress on West Texas Cotton Cultivars. Plant and Soil Sciences, Texas Tech University
35. Eng Hwa, Ph.D., Spring 2013. Genetics of Cotton Fiber Elongation. Plant and Soil Sciences, Texas A&M University
36. Zhuanzhuan Ma, M.S., Spring 2013. Investigating the impact of drought stress on cotton fiber properties. Plant and Soil Sciences, Texas Tech University
37. Shanshan Li, M.S, Spring 2013. Preparations and Characterizations of Cellulose-based Aerogels., Plant and Soil Sciences, Texas Tech University
38. Eng Hwa, Ph.D., Spring 2013. Genetics of Cotton Fiber Elongation. Plant and Soil Sciences, Texas A&M University
39. Rajeev Rajbhandari, Ph.D., Fall 2013. Parameters affecting dye-uptake of cotton fibers. Plant and Soil Sciences, Texas Tech University
40. Liyanage Sumedha, M.S., Fall 2013. Chemical and Physical Characterization of Guar Galactomannan Extracted from Guar Seeds. Crop Science, Texas Tech University

41. Bablu Sharma, Ph.D., Spring 2014. High Throughput Phenotyping of Cotton in Multiple Irrigation Environments. Plant and Soil Sciences, Texas Tech University
42. Shayamalee Abeysinghe, M.S., Fall 2014. Cotton fabric functionalization to impart wrinkle free properties. Plant and Soil Science, Texas Tech University
43. Bralio Hendon, Ph.D., Spring 2015. Improvement of Novel Traits in Cotton through Chemical Mutagenesis. Plant and Soil Sciences, Texas Tech University
44. Tanya Jackson, M.S., Spring 2015. Organic-Inorganic Hybrid Aerogels. Plant and Soil Science, Texas Tech University
45. Chris Turner, Ph.D. student. Fall 2016. Training a New Instrument to Measure Cotton Fiber Maturity Using Transfer Learning, Electrical Engineering, Texas Tech University
46. Chang Chao, M.S., Crop Science non-thesis, Plant and Soil Science, Texas Tech University. Completed August 2016.
47. Mishon Hopkins, M.S., Crop Science at a Distance, Plant and Soil Science, Texas Tech University. Completed November 24, 2015, graduated May 2016.
48. Prakash Parajuli, M.S. Spring 2017. FTIR microspectroscopy study of compositional changes in biomolecules in biological samples. Plant and Soil Science, Texas Tech University.
49. Moss Cameron, M.S. Crop Science at a Distance, Plant and Soil Science, Texas Tech University. Completed June 23, 2017.
50. Tharaka Wansapura Poorna, Ph.D. Spring 2017. Cellulose and chitin based composites: preparation and characterization. Plant and Soil Science, Texas Tech University. Completed.
51. Sanjit Acharya, Ph.D. Spring 2017. Cellulose dissolution in different solvents. Plant and Soil Science, Texas Tech University.
52. Witt Travis, Ph.D. Student, Spring 2017. Exploring the variability of morphological, agronomic, and fiber quality traits to improve cotton's response to deficit irrigation. Plant and Soil Sciences, Texas Tech University
53. Farzad Hosseinali, Ph.D. Spring 2018. Surface attributes and multiscale frictional properties of cotton (*Gossypium hirsutum L.*) fibers Student, Department of Biological and Agricultural Engineering, Texas A&M University.
54. Niwanthi Dissanayake, Ph.D. Spring 2019. Dissolution of cellulose in ionic liquids. Department of Plant and Soil Science, Texas Tech University.

55. Rumi Shaida Sultana, M.S. Spring 2019. Conversion of low-quality cotton to bioplastic, Department of Plant and Soil Science, Texas Tech University.
56. Alexandra Ulrich, M.S. Fall 2019. A comparison of publicly available QTL SSRs for MAS with traditional plant breeding selection methods in cotton. Department of Soil and Crop Sciences, Texas A&M University.
57. Drutdaman Bhangu, Ph.D. Spring 2020. Proof of concept: Novel Gene Based Breeding vs Field Based Breeding in Improving Fiber Quality Traits in Cotton. Department of Soil and Crop Sciences, Texas A&M University.

M.S. and Ph. D. supervisions completed (Chair or Co-Chair)

1. Richard Frydrych, Contribution à l'étude du collage du coton au moyen de méthodes mécaniques et thermomécaniques, Ph.D., December 1996, Haute Alsace University, Mulhouse, France. (J.Y. Dréan and E. Hequet)
2. Chongrak Kaewprasit, Contribution à l'estimation de la surface spécifique des fibres de coton: Relations entre surface et propriétés physiques, Ph.D., July 1997, Montpellier II University, France. (Lindheimer and E. Hequet)
3. Sri Kaushik Pavani, Segmentation and classification of four common cotton contaminants in X-ray microtomographic images, Master, October 2003, Texas Tech University, (H. Sari-Sarraf and E. Hequet)
4. Mehmet S. Dogan, Assessment of Trash Content of Cotton using 2D X-ray Imagery, Master, July 2004, Texas Tech University, (H. Sari-Sarraf and E. Hequet)
5. Sarangoo Ukhnaa, Etude des propriétés physiques et mécaniques de la fibre de cachemire, limite de filabilité, Ph.D., January 2005. Haute Alsace University, Mulhouse, France, and Science and Technology University, Oulan Bator, Mongolia. (Dréan, Enkhuya, and Hequet)
6. Christopher Braden, Inheritance of cotton fiber length and distribution, Ph.D., June 2005. Plant and Soil Sciences, Texas A&M University, (W. C. Smith and E. Hequet)
7. Chaitanya Raju, Segmentation of radiographs of cervical spine using level sets, Master, May 2006, Texas Tech University, (H. Sari-Sarraf and E. Hequet)
8. Mao Cui, Unsupervised segmentation of two-texture images using Gabor filters with optimized coefficients, Master, October 2006, Texas Tech University, (H. Sari-Sarraf and E. Hequet)
9. Gene Maulding, Yield components of new germplasm, Master, March 2007, Texas Tech University, (E. Hequet and D. Albers)

10. Muneem Shariar, Machine vision system for the quantification of cotton fiber length and maturity, Master, June 2008, Texas Tech University, (H. Sari-Sarraf and E. Hequet)
11. Arunkumar Gururajan, Generalized schemes for automatic and interactive texture segmentation, Ph.D., October 2008. Texas Tech University, (H. Sari-Sarraf and E. Hequet)
12. Carol Mason, Improving Cotton (*Gossypium hirsutum* L.) for Fiber and Yarn Quality, Ph.D., December 2009. Texas Tech university, (E. Hequet and J. Dever)
13. Matthew Hill, Machine Vision System for Simultaneous Measurement of Dimensional Changes and Soil Release in Printed Fabric, Master, June 2010, Texas Tech University. (H. Sari-Sarraf and E. Hequet)
14. Muneem Shahriar, Feature-Based Transfer Learning in Novel Systems, Ph.D., August 2012, Texas Tech University. (H. Sari-Sarraf and E. Hequet)
15. Kendra Gregory, Degree of Whiteness and Maturity among World Cotton Cultivars, Master, June 2012, Texas A&M, (C.W Smith and E. Hequet)
16. Farzad Hosseinali, Investigation on the Tensile Properties of Individual Cotton (*Gossypium hirsutum* L.) Fibers, M.S., August 2012, Texas Tech University (Chair)
17. Dev Paudel, Evaluating the Potential of New Testing Methods for Cotton (*Gossypium hirsutum* L.) Breeding, M.S. August 2012, Texas Tech University (Chair)
18. James Hodgson, M.S., August 2012, Plant and Soil Science (Distance), Texas Tech University (Chair)
19. Holli Elaine Myers, M.S., December 2012, Plant and Soil Science (Distance), Texas Tech University (Chair)
20. Roji Manandhar, Ph.D., Fall 2013. Impact of cotton fiber maturity on cotton processing. Plant and Soil Science, Texas Tech University (Chair)
21. Kolbyn Joy, Ph.D., Spring 2014. Inheritance of cotton fiber length and strength. Soil and Crop Sciences, Texas A&M University (co-Chair)
22. Brendan Kelly, Ph.D., Fall 2014. Multivariate analysis of fiber properties and their relation to yarn properties. Plant and Soil Science, Texas Tech University (Chair)
23. Ruvini Mathangadeera, M.S., Fall 2014. Evaluating the impact of fiber processing on cotton fiber tensile properties. Plant and Soil Science, Texas Tech University (Chair)
24. Henry Hunter, M.S., Spring 2014. Plant and Soil Science (Distance), Texas Tech University (Chair)

25. Dylan Wann, Ph.D., Spring 2015. Breeding Value and Utilization of Host Plant Resistance for Integrated Thrips (Thysanoptera: Thripidae) Management in Cotton (*Gossypium* spp.). Plant and Soil Science, Texas Tech University (Chair)
26. Charles Langdon, Fall 2015. M.S. student non-thesis, Plant and Soil Science, Texas Tech University (Chair)
27. Kolby McCormick, Fall 2015. M.S. student. Improved Testing Methods for Cotton Breeders: Calibration of the High-Volume Instrument (HVI) Elongation Measurement. Plant and Soil Science, Texas Tech University (Chair)
28. Deepika Mishra, Ph.D., Fall 2016. Improvement of cotton fiber quality with chemical mutagenesis, Plant and Soil Science, Texas Tech University (Auld Chair, Hequet co-Chair)
29. Suman Lamichhane, M.S. student. Spring 2016. An Evaluation of Cotton Fiber Cross-sections with the Fiber Image Analysis Software (FIAS). Plant and Soil Science, Texas Tech University (Chair)
30. Nicholas Gallington, M.S. student (distance) Spring 2017. Plant and Soil Science, Texas Tech University (Chair)
31. Addissu Ayele, Ph.D., Spring 2017. Impacts of Within-Plant Variability on Fiber Quality, Fiber Density and Ring Spun Yarn Quality of Upland Cotton Cultivars. Plant and Soil Science, Texas Tech University (Hequet Chair, Kelly co-Chair)
32. Most Arifa Sultana, M.S. Summer 2018. Origin and implication of seed coat fragment contamination on yarn quality. Plant and Soil Science, Texas Tech University (Hequet Chair, Kelly co-Chair)
33. Scott Baker, M.S. Spring 2018. Within-plant variability of upland cotton varieties in multiple environments. Plant and Soil Science, Texas Tech University (Chair).
34. Amal Bouyanfif, Ph.D. Summer 2019. Effects of fatty acid supplementation on gene expression, lifespan, and biochemical changes in wild type and mutant *C. elegans* strains. Plant and Soil Science, Texas Tech University (Hequet Chair, Moustaid-Moussa co-Chair).
34. Rohan Brown, M.S. Fall 2019. Investigating the Variability of Cotton Production in the U.S.A. Plant and Soil Science, Texas Tech University (Hequet Chair, Kelly co-Chair).
35. Joao Paulo Saraiva Morais, Ph.D. Spring 2020. Exploration and Improvement of Cotton Fiber Length Distribution. Plant and Soil Science, Texas Tech University (Hequet Chair, Kelly co-Chair).

36. Zachary Hinds, Ph.D. Summer 2020. Exploration and Improvement of Cotton Fiber Length Distribution, Plant and Soil Science, Texas Tech University (Hequet Chair, Kelly co-Chair).
37. Md Abu Sayeed, Ph.D. Summer 2020. Improvement of the cotton fiber length measurements using High Volume Instrument (HVI) fibrogram. Plant and Soil Sciences, Texas Tech University

Habilitation à diriger des recherches (Chair)

1. Nouredine Abidi. Habilitation à Diriger des Recherches (Université de Haute-Alsace, France). Caractérisation de la structure et modification de la surface de macromolécules inorganiques et biologiques : Synthèse des travaux. December 2007.

Ph.D. and M.S. supervisions underway (Chair or Co-Chair):

1. Chris Delhom, Ph.D., Plant and Soil Science, Texas Tech University (Hequet Chair, Kelly co-Chair)
2. Jacob James, M.S., Crop Science at a Distance, Plant and Soil Science, Texas Tech University (Chair).
3. Addisu Tesema Ferede, Ph.D., Plant and Soil Science, Texas Tech University (Hequet Chair, Kelly co-Chair)

Graduate Thesis and Dissertation Committees underway

1. Vikki Martin, Ph.D. Student, Department of Plant and Soil Science, Texas Tech University
2. Puneet Mangat, Ph.D. Student, Department of Plant and Soil Science, Texas Tech University
3. Shaida Sultana Rumi, Ph.D. Student, Department of Plant and Soil Science, Texas Tech University
4. Harsh Chaudhari, M.S. Student, Department of Plant and Soil Science, Texas Tech University

Chairmanships and Memberships extramural:

- Chairman Cotton Quality Measurement Conference, Beltwide Cotton Conferences (2004, 2005, and 2006).
- International Committee on Testing Methods, International Textile Manufacturers Federation (ITMF).

- American Society for Testing and Materials (ASTM).
- American Association of Textile Chemists and Colorists (AATCC).
- Society of Photo-Optical Instrumentation Engineers (SPIE).
- Committee on Cotton Quality Measurements (United States Department of Agriculture).
- Fiber Society
- American Association for the Advancement of Science (AAAS)
- Association for the Advancement of Industrial Crops, (AAIC)
- American Society of Agronomy (ASA).
- National Association of Plant Breeders (NAPB).
- Board member Texas State Seed and Plant Board (since 2015)
- Member Plains Cotton Growers advisory group (since 2014)
- Journal of Cotton Science editorial board member (since 2009).
- Texas State Support Committee advisory board member (since 2016).
- Vice community leader of the Agronomy Society of America “Cotton and Other Fibers” Community in 2016. Community leader in 2017.
- Vice Chair of the Editorial Board and Senior Editor of the Journal of Cotton Research (China) since 2018.

Chairmanships and Memberships intramural (Texas Tech University):

- Member of the CASNR (College of Agriculture and Natural Resources) Marketing Task Force (2003-2005).
- Chair of the CASNR International Activities Committee (2004-08).
- Chair of the Plant and Soil Science website improvement committee (2006-07).
- Member of the Plant and Soil Science strategic planning committee (2006-07).
- Chair of the Genetics and Fibers teaching group (2008).

- Member of the Bioproducts committee (2008).
- Member of the Plant and Soil Science Leadership Team (2010).
- Chair of the CASNR Research and Graduate Studies Committee (2011-2013)
- Chancellor's Council Distinguished Teaching and Research Award committee (2015 and 2016).
- STEM proposals ranking (2016).
- Honorary PhD degree committee chair (2016).
- PIRE proposals ranking (2016).

Honorary:

1. Gamma Sigma Delta; 2010 to present

Editorial duties:

- Assistant Editor for Textile Technology, Journal of Cotton Science (2001-2002)
- Associate Editor for Textile Technology, Journal of Cotton Science (2002-2007)
- Editor-in-Chief, Journal of Cotton Science (01/01/2008 – 03/31/2009)
- Member of the Editorial Board, Journal of Cotton Science (since 03/31/09)
- Vice Chair of the Editorial Board and Senior Editor of the Journal of Cotton Research (since 03/15/18)

Manuscript reviewer for:

- Journal of Cotton Science
- Textile Research Journal
- Journal of Electrical imaging
- Agronomy Journal
- Journal of the Textile Institute

- Journal of Engineered Fibers and Fabrics
- Journal of Industrial Textiles
- Crop Science
- Crop and Pasture Science (Australia)
- Industrial Crops and Products
- Cellulose
- Vibrational Spectroscopy
- Field Crop Research
- MethodsX
- Machine Vision and Applications
- Journal of Cotton Research

Awards

- CASNR Research Award (2008)
- Chancellor's Distinguished Research Award (2010)
- Bernie E. Rushing, Jr. Faculty Distinguished Research Award (2012)
- Horn professorship (2016)
- Joint Cotton Breeding Committee Cotton Genetics Research Award (2019)

H.D.R. Thesis

H1. E.F.Hequet. 2004. La fibre de coton du champ aux étoffes : Synthèse des travaux (Cotton fibers: From field to fabric). ENSITM – Haute-Alsace University.

Ph.D. Thesis

T1. E.F. Hequet. 2003. Implication of the Origin of Honeydew Contamination on Stickiness Measurements and Fiber Processing. 03MULH0722. ENSITM - Haute-Alsace University, France.

Patents

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- A115. Hugie K., Smith W., **Hequet** E.F., and S. Hague. 2014. Effects of Plant Pubescence on Spinning Performance in Upland Extra Long Staple Cotton. Beltwide Cotton Conferences. January 6-8, 2014. New Orleans, Louisiana
- A116. Mishra D., T. Witt, B. Hendon, C. Thompson, E.F. **Hequet** and D.L. Auld. 2014. Utilization of Cotton Fiber Mutants in Pedigree Selection. ASA, CSSA & SSSA International Annual Meeting. Nov. 2-5, 2014. Long Beach CA
- A117. Ayele A., **Hequet** E.F., and Kelly B. 2015. Within-Plant Variability of Cotton Fiber Quality. Beltwide Cotton Conferences. January 5-7, 2015. San Antonio, Texas.
- A118. Mathangadeera R.W., **Hequet** E.F., Kelly B., and Dever J.K. 2015. Impact of Fiber Processing on Cotton Fiber Tensile Properties. Beltwide Cotton Conferences. January 5-7, 2015. San Antonio, Texas.
- A119. McCormick K.M., **Hequet** E.F., Kelly B., *Ayele A.G. 2015. Stability of the High Volume Instrumenty (HVI) Elongation Measurement. Beltwide Cotton Conferences. January 5-7, 2015. San Antonio, Texas.

- A120. **Hequet** E.F. and Gordon S. 2015. Relationships among Individual Fiber Tensile Properties and Fiber Bundle Tensile Properties. Beltwide Cotton Conferences. January 5-7, 2015. San Antonio, Texas.
- A121. Lamichhane S, **Hequet** E.F., Kelly B., Ayele A.G., and McCormick K.M. 2015. An Evaluation of the Improved FIAS Software. Beltwide Cotton Conferences. January 5-7, 2015. San Antonio, Texas.
- A122. Baker S., Ayele A.G., **Hequet** E.F., and Kelly B. 2015. An evaluation of the Within-Plant Fiber Length Distributions of Commercial Cotton Varieties Grown in Multiple Environments and Under Different Irrigation Systems. Beltwide Cotton Conferences. January 5-7, 2015. San Antonio, Texas.
- A123. Kelly B. and **Hequet** E.F. 2015. Investigating the Relationship between Cotton Fiber and Yarn Quality. Beltwide Cotton Conferences. January 5-7, 2015. San Antonio, Texas.
- A124. Abidi N., Liyanage S., and **Hequet** E.F. 2015. Cellulose Deposition and Organization Investigated by Gel Permeation Chromatography and X-Ray Diffraction. Beltwide Cotton Conferences. January 5-7, 2015. San Antonio, Texas.
- A125. Hendon B.R., **Hequet** E.F., *Mishra D., *Imel-Vice R.K., *Davis L.C., and Auld D.L. 2015. Development of Divergent HVI Fiber Quality Traits from Two Chemically Mutated Populations of Upland Cotton (*Gossypium hirsutum* L.). 27th Annual Meeting of the Association for the Advancement of Industrial Crops. October 18-22, 2015. Lubbock, Texas.
- A126. Ayele A., Baker S., **Hequet** E.F., and Kelly B. 2015. The Impacts of Environmental Variations on Within Plant Cotton Fiber Quality. 27th Annual Meeting of the Association for the Advancement of Industrial Crops. October 18-22, 2015. Lubbock, Texas.
- A127. Mishra D., **Hequet** E.F., and Auld D.L. 2015. Breeding for improved Fiber Quality Using Cotton Mutants (*Gossypium hirsutum* L.) in a pedigree selection scheme. 27th Annual Meeting of the Association for the Advancement of Industrial Crops. October 18-22, 2015. Lubbock, Texas.
- A128. **Hequet** E.F. and Kelly B. 2015. Impact of Non-HVI Fiber Quality Parameters on Processability and End-Products. ASA-CSSA-SSA International Annual Meeting. November 15-18, 2015. Minneapolis, Minnesota.
- A129. **Hequet** E.F. 2015. Current and Future Fiber Quality Demand: Implications for the Cotton Production Sector. 10th Congresso Brasileiro do Algodao. September 1-4, Foz do Iguacu. Brazil.
- A130. Mishra D., R.K. Vise, K.M. Rai, K. Hugie, C.W. Smith, V. Mendu, E.F. **Hequet**, D. Auld. 2016. Genetic mapping of fiber quality traits in upland cotton using SSR markers. Beltwide Cotton Conference. January 5-7, 2016. New Orleans, U.S.A.

- A131. McCormick, E.H. **Hequet**, B. Kelly. 2016. Calibration of the High Volume Instrument (HVI) Elongation Measurement. Beltwide Cotton Conference. January 5-7, 2016. New Orleans, U.S.A.
- A132. Lamichhane S., E.F. **Hequet**, B. Kelly. 2016. An Evaluation of Cotton Fiber Cross-sections with the Image Analysis Software (FIAS). Beltwide Cotton Conference. January 5-7, 2016. New Orleans, U.S.A.
- A133. Hugie K., C.W. Smith, E.F. **Hequet**, K. Joy. 2016. Divergent Selection in *Gossypium* for Fiber Length and Strength. Beltwide Cotton Conference. January 5-7, 2016. New Orleans, U.S.A.
- A134. Ayele A.G., E.F. **Hequet**, B. Kelly. 2016. Within-plant Variation in the Number of Cotton (*Gossypium hirsutum*) Fibers per Seed Surface Area. Beltwide Cotton Conference. January 5-7, 2016. New Orleans, U.S.A.
- A135. Kelly B. and E.F. **Hequet**. 2016. Extracting Cotton Fiber Maturity and Fineness from the AFIS Length Distribution. Beltwide Cotton Conference. January 5-7, 2016. New Orleans, U.S.A.
- A136. Hinds Z., Lamichhane S., B. Kelly, E.F. **Hequet**. 2016. A Method for Measuring Cotton Seed Compression Force as a Potential Indication of Propensity to Create Seed Coat Fragments. 2016. ASA-CSSA-SSSA International Annual Meeting. November 6-9, 2016. Phoenix, Arizona.
- A137. Kelly B., Ayele A., E.F. **Hequet**. 2016. The Impact of Variation in Cotton Fiber Maturity on the Estimation of Yield Components. ASA-CSSA-SSSA International Annual Meeting. November 6-9, 2016. Phoenix, Arizona.
- A138. **Hequet** E.F, S. Lamichhane, and V. Martin. 2016. Creation of a set of reference cotton for fiber maturity measurements. International Committee on Cotton Testing Methods. International Textile Manufacturers Federation. March 14-15, 2016. Bremen, Germany
- A139. **Hequet** E.F., S. Baker, C. Turner, B. Kelly, H. Sari-Sarraf, S. Gordon. 2016. Breaking the Fiber Quality Ceiling: Limitations of Cotton Fibers Bundle Testing. International Cotton Conference. March 16-18, 2016. Bremen, Germany.
- A140. **Hequet** E.F., S. Baker, C. Turner, B. Kelly, H. Sari-Sarraf, S. Gordon. 2016. Evolution of Cotton Fiber Quality: An Imperative for Future Market Needs. World Cotton Research Conference – 6. May 2-6, 2016. Goiania, Goias, Brazil.
- A141. Kelly B. and E.F. **Hequet**. 2017. The development of cotton fiber elongation reference material. Beltwide Cotton Conference. January 4-6, 2017. Dallas, TX. U.S.A.

- A142. Hinds Z., B. Kelly, and E.F. **Hequet**. 2017. The impact of trash content on cotton fiber quality assessment. Beltwide Cotton Conference. January 4-6, 2017. Dallas, TX. U.S.A.
- A143. Ayele A., E.F. **Hequet**, and B. Kelly. 2017. The impact of fiber maturity on estimating the number of cotton (*Gossypium hirsutum* L.) fibers per seed surface area. Beltwide Cotton Conference. January 4-6, 2017. Dallas, TX. U.S.A.
- A144. Bouyanfif A., S. Liyanage, J.E. Hewitt, S.A. Vanapalli, N. Moustaid-Moussa, E.F. **Hequet**, N. Abidi. FTIR imaging detects diet and genotype-dependent changes in chemical composition in wild type and mutant *C. elegans* strains. 73rd Annual Southwest Regional Meeting American Chemical Society, October 29-November 1, 2017, Lubbock, TX.
- A145. Kelly B. and E.F. **Hequet**. 2017. Using the HVI to Characterize Within Sample Variation in Cotton Fiber Length. ASA-CSSA-SSSA International Annual Meeting. October 22-25, 20107. Tampa, Florida.
- A146. Chen J., N. Abidi, J.J. Burke, and E.F. **Hequet**. 2017. Effect of Drought Stress on Cotton Fiber Development and Fiber Quality Traits. ASA-CSSA-SSSA International Annual Meeting. October 22-25, 20107. Tampa, Florida.
- A147. Bouyanfif, A., Liyanage, S., Hewitt, J.E., Vanapalli, S., Moustaid-Moussa, N., **Hequet**, E., Abidi, N. 2018. 255th American Chemical Society National Meeting & Exposition, New Orleans, LA, "FTIR imaging detects diet and genotype-dependent changes in chemical composition in wild-type and mutant *C. elegans*,"
- A148. Morais, J., Kelly, B. R., **Hequet**, E. F. 2018. A Comparison of Two Boll Sampling Strategies for Fiber Quality Improvement in a Pedigree Scheme. Beltwide Cotton Conferences, San Antonio, TX.
- A149. Sayeed, M., Kelly, B. R., **Hequet**, E. F. 2018. A New Approach to Characterize the Total within sample variation in fiber length: utilization of the whole fibrogram, Beltwide Cotton Conferences, San Antonio, TX.
- A150. James, J., Kelly, B. R., **Hequet**, E. F. 2018. Enhancing U.S. Cotton Classing with Varietal Data. Beltwide Cotton Conferences, San Antonio, TX.
- A151. Ayele, A., Kelly, B. R., **Hequet**, E. F. 2018. Evaluating the Impact of Within-Plant Variability of Fiber Length Distribution on Yarn Quality of Upland Cotton Cultivars.
- A152. Hinds, Z., Kelly, B. R., **Hequet**, E. F. 2018. Impact of Breeding Methods on Fiber Length Distribution Improvement. Beltwide Cotton Conferences, San Antonio, TX.
- A153. Hinds, Z., Kelly, B. R., **Hequet**, E. F. 2018. Targeted Fiber Length Distribution for Improvement of Yarn Quality. Beltwide Cotton Conferences, San Antonio, TX.

- A154. Sultana, A., Kelly, B. R., **Hequet**, E. F. 2018. Yarn Seed Coat Fragments Identification. Beltwide Cotton Conferences, San Antonio, TX.
- A155. Morais, J., Kelly, B. R., **Hequet**, E. F. 2018. Evaluation of Cotton (*Gossypium hirsutum*) Fiber Propensity to Break in a Pedigree Scheme. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD.
- A156. Hinds, Z., Kelly, B. R., **Hequet**, E. F. 2018. Variation in AFIS Length Distributions of 8 F2 Cotton (*Gossypium hirsutum*) Populations. ASA-CSSA-SSSA International Annual Meeting, Baltimore, MD.
- A157. Morais, J., Kelly, B. R., **Hequet**, E. F. 2018. A Comparison of Two Boll Sampling Strategies for Fiber Quality Improvement in a Pedigree Scheme. Beltwide Cotton Conferences, San Antonio, TX.
- A159. Sayeed, M., Kelly, B. R., **Hequet**, E. F. 2018. A New Approach to Characterize the Total within sample variation in fiber length: utilization of the whole fibrograms. Beltwide Cotton Conferences, San Antonio, TX.
- A160. Sayeed, M. A., Kelly, B., **Hequet**, E. 2019. HVI Fibrogram: A Better Measurement of Cotton Fiber Length to Improve Yarn Quality Predictions. ASA-CSSA-SSSA International Annual Meeting.
- A161. Hinds, Z., Kelly, B., **Hequet**, E. 2019. Within Sample Variation in Fiber Length Distributions of Cotton (*Gossypium Hirsutum*). ASA-CSSA-SSSA International Annual Meeting.
- A162. Morais, J. P., Kelly, B., **Hequet**, E. 2019. Effects of Non-Lint Material on Heritability Estimates of Cotton Fiber Length Parameters. ASA-CSSA-SSSA International Annual Meeting.
- A163. Sayeed, M. A., Kelly, B., **Hequet**, E. 2019. Calibration of the High Volume Instruments with the Whole Fibrogram. Beltwide Cotton Conferences, New Orleans, LA.
- A164. James, J., Kelly, B., **Hequet**, E. 2019. Enhancing US Cotton Classing with Varietal Data. Beltwide Cotton Conferences, New Orleans, LA.
- A165. Morais, J. P., Kelly, B., **Hequet**, E. 2019. Evaluation of Cotton Fibers Propensity to Break in F3 Breeding Lines. Beltwide Cotton Conferences, New Orleans, LA.
- A166. Hinds, Z., Kelly, B., **Hequet**, E. 2019. Exploring Variation in AFIS Length Distribution of 8 F2 Populations. Beltwide Cotton Conferences, New Orleans, LA.
- A167. Delhom, C., **Hequet**, E., Kelly, B., Martin. 2019. HVI Elongation Round Trial Results. Beltwide Cotton Conferences, New Orleans, LA.

- A168. Sayeed, M. A., Kelly, B., **Hequet**, E. Using the HVI Fibrogram to Explain Variation in Yarn Quality. Beltwide Cotton Conferences, New Orleans, LA.
- A169. Kelly, B., **Hequet**, E. 2019. HVI Elongation: Laying the Foundations for a New Fiber Quality Measurement. Beltwide Cotton Conferences. New Orleans, LA.
- A170. Kelly, B., Hequet, E., Morais, J. P., Beltwide Cotton Conferences, Austin, "Capturing the potential for fiber breakage during industrial processing," National. (January 2020).
- A171. Morais, J. P., Hinds, Z., Kelly, B., **Hequet**, E., Beltwide Cotton Conferences, Austin, "Effect of non-lint content and processing on heritability estimates of cotton fiber length parameters," National, published in proceedings. (January 2020).
- A172. Tesema, A. F., Kelly, B., **Hequet**, E., Beltwide Cotton Conferences, Austin, "Evaluation of the stability of HVI fibrogram measurements," National, published in proceedings. (January 2020).
- A173. Abu, S., Kelly, B., **Hequet**, E., Beltwide Cotton Conferences, Austin, "Improvement of the prediction of yarn quality using High Volume Instrument," National. (January 2020).
- A174. **Hequet**, E., Kelly, B., Beltwide Cotton Conferences, Austin, "Stability of HVI calibration standards for bundle elongation measurements," National, published in proceedings. (January 2020).
- A175. Hinds, Z., **Hequet**, E., Kelly, B., Beltwide Cotton Conferences, Austin, "Variation and application of AFIS fiber length distributions," National, published in proceedings. (January 2020).

Conference proceedings – Invited papers and presentations

- I1. **Hequet** E., R. Frydrych. 1994. The problem of cotton stickiness: CIRAD work on controlling stickiness, Proceedings of the 53rd Plenary Meeting of the International Cotton Advisory Committee, Recife, Pernambuco, Brazil, September, 45-48.
- I2. Ethridge D., E. **Hequet**. 1998. The ITC project on stickiness measurement, 11th Engineered Fiber Selection System Conference Proceedings. Memphis, TN, U.S.A., June 8-10.
- I3. **Hequet** E. M. Ethridge. 1999. Progress on practical stickiness measurement, Cotton Incorporated Twelfth Annual Engineered Fiber Selection System Conference, May 17-19, Greenville, SC, U.S.A., 6 pages
- I4. **Hequet** E.F., D. Ethridge, W. Cole, B. Wyatt. 2000. How cotton stickiness relate to spinning efficiency, Proceedings EFS Conference, April 17-19, Memphis, TN, U.S.A., 99-121.

- I5. **Hequet E.**, N. Abidi, M. Watson. 2001. Relationship between sugar properties and stickiness measurements, ICAC & Common Fund for Commodities workshop on cotton stickiness, July 2-4 – Lille, France, 118-131.
- I6. **Hequet E.** and D. Ethridge. 2002. Cotton quality evaluation for cotton breeders and biotechnologists, 15th Annual EFS System Conference Proceedings, 95-112. June 10-12, 2002. Memphis, TN, USA.
- I7. Turner C.N., H. Sari-Sarraf, A. Zhu, E. F. **Hequet**, and S. H. Lee. 2002. Automatic Assessment of Fabric Smoothness, Proc. IEEE 45th MWSCAS, Vol. 2, p. 379-382, Tulsa, OK, USA.
- I8. **Hequet E.F.** and D. Ethridge. 2005. Impacts of Fiber Length Distribution on Market Value and Yarn Quality: Implications for U.S. Cotton. 18th Annual 2005 EFS System Conference. Memphis, Tennessee, June 6-8.
- I9. Ethridge M.D., E.F. **Hequet**. 2005. Harmonization of Rapid Machine Testing of Fiber Quality. International Cotton Advisory Committee. 64th Plenary Meeting. Liverpool, United Kingdom. 25-29 September.
- I10. **Hequet E.F.**, 2006. Multidisciplinary Approach to Fiber Testing for Biotechnologists. 19th EFS System Conference, Greenville SC. June 5-7.
- I11. **Hequet F.**, 2007. Vision systems and cotton quality. 20th EFS System Conference, Greenville SC. June 4-7.
- I12. **Hequet F.**, 2008. The next generation of HVI: What could it be? 21st EFS System Conference, Memphis TN, June 10-11.
- I13. **Hequet E.F.**, and N. Abidi. 2009. Update on spinning research. Proc. Beltwide Cotton Conferences, National Cotton Council, January 5-8, San Antonio, TX, TN, U.S.A.
- I14. **Hequet E.F.** 2010. Importance of Cotton fiber Quality. Texas Plant Protection. December 7-8. College Station, TX.
- I15. **Hequet E.**, N. Abidi, J. Dever, and J. Osorio*. Improving fiber tenacity and elongation of U.S. germplasm. Joint CERI-ICRC Symposium. April 2010. Lubbock, TX.
- I16. **Hequet E.**, R. Boman, J. Wanjura, N. Abidi, and D. Ethridge. Picker system vs. stripper system. Joint CERI-ICRC Symposium. April 2010. Lubbock, TX.
- I17. **Hequet E.** and N. Abidi. Development of a micro-spinning protocol to characterize spinning properties of chitin-containing cotton fibers. Project Revolution Symposium. October 21st, 2010. Lubbock, TX.

- I18. **Hequet** E.F. 2010. Textile performance evaluation of selected High Plains cotton varieties. Plains Cotton Improvement Committee Annual Meeting. March, 2010. Lubbock, TX.
- I19. **Hequet** E.F., N. Abidi, R.K. Boman, and J. Wanjura. 2011. Bringing a Portion of Texas Plains Cotton into Premium Yarn Markets. CERI-ICRC Symposium, March 29 2011, Lubbock, TX.
- I20. Hosseinali F., E. **Hequet** and N. Abidi. 2011. Determination of Individual Fibers Tensile Properties: Relationships with Bundle Strength, Maturity, Length Distribution, and Fiber Breakage. CERI-ICRC Symposium, March 29 2011, Lubbock, TX.
- I21. **Hequet** E.F. 2011. Importance of Cotton fiber Quality. Texas/Oklahoma Cotton Physiology working Group. January 26-28, Austin, TX.
- I22. **Hequet** E.F. and D. Ethridge. 2011. Textile Performance Evaluation of Selected High Plains Cotton Varieties. Plains Cotton Improvement Committee Meeting. March 22, Lubbock, TX.
- I23. **Hequet** E.F. 2011. What Mills Are Looking for in Cotton Fibers? Southwest Ginners School. March 28-30, Lubbock, TX.
- I24. **Hequet** E.F. and N. Abidi. 2011. Development of a micro-spinning protocol to characterize spinning properties of chitin-containing cotton fibers. Project Revolution Symposium. May 9th, Lubbock, TX.
- I25. **Hequet** E.F. and B. Kelly. 2012. Predicting yarn quality: An indispensable tool for cotton breeders. International Cotton Conference. Bremen, Germany, March 21-24, 2012, pp57-70.
- I26. **Hequet** E.F., R.K. Boman, J. Wanjura. 2013. Effect of Harvesting Methods on Fiber and Yarn Quality. 9th Congresso Brasileiro do Algodão, Sao Paulo, Brazil. September 2-4 2013.
- I27. **Hequet** E.F., B. Kelly. 2013. Breeding for Improved Processability and End-product Quality. 9th Congresso Brasileiro do Algodão, Sao Paulo, Brazil. September 2-4 2013.
- I28. **Hequet** E.F. 2013. Cotton fiber maturity complex and cotton stickiness. 9th Congresso Brasileiro do Algodão, Sao Paulo, Brazil. September 2-4 2013.
- I29. **Hequet** E.F., B. Kelly, and J. Dever. 2014. Breeding for Better Fiber Elongation: A key to improving yarn tensile properties. International Cotton Conference. Bremen, Germany, March 21-24, 2014, pp57-70.
- I30. **Hequet** E.F, S. Lamichhane, and V. Martin. 2016. Creation of a set of reference cotton for fiber maturity measurements. International Committee on Cotton Testing Methods. International Textile Manufacturers Federation. March 14-15, 2016. Bremen, Germany

- I31. **Hequet** E.F., S. Baker, C. Turner, B. Kelly, H. Sari-Sarraf, S. Gordon. 2016. Breaking the Fiber Quality Ceiling: Limitations of Cotton Fibers Bundle Testing. International Cotton Conference. March 16-18, 2016. Bremen, Germany.
- I32. **Hequet** E.F., S. Baker, C. Turner, B. Kelly, H. Sari-Sarraf, S. Gordon. 2016. Evolution of Cotton Fiber Quality: An Imperative for Future Market Needs. World Cotton Research Conference – 6. May 2-6, 2016. Goiania, Goias, Brazil.
- I33. **Hequet** E.F. and Kelly B. 2015. Impact of Non-HVI Fiber Quality Parameters on Processability and End-Products. ASA-CSSA-SSA International Annual Meeting. November 15-18, 2015. Minneapolis, Minnesota.
- I34. **Hequet** E.F. 2015. Current and Future Fiber Quality Demand: Implications for the Cotton Production Sector. 10th Congresso Brasileiro do Algodao. September 1-4, Foz do Iguacu. Brazil.

Grants received as PI or Co-PI

1992-1997 with CIRAD (Centre de coopération internationale en recherche agronomique pour le développement), France.

Total funded: \$2,381,896

1992 (Total = \$114,428)

1. Research on international sticky cottons. Zellweger Uster, \$18,000, **100%** (PI).
2. Neutralisation du collage de la fibre de coton (Neutralization of cotton stickiness). Ministère de l'industrie (French Ministry of Industry), \$96,428. **100%** (PI).

1993 (Total = \$77,750)

3. Seed coat neps classification on AFIS. Validation of algorithm. Zellweger Uster, \$4,740, **100%** (PI).
4. Mise au point d'un appareillage de détection rapide du collage des fibres de coton (Development of the High Speed Stickiness Detector). Agence nationale de valorisation de la recherche (ANVAR), \$73,010, **100%** (PI).

1994 (Total = \$71,720)

5. Validation of the High Speed Stickiness Detector prototype. Cotton Incorporated, \$62,000, **100%** (PI).
6. Seed coat neps classification on AFIS. Ring spinning validation. Zellweger Uster, \$4,740, **100%** (PI).

7. Seed coat neps classification on AFIS. Seed coat fragment counting on card web. Zellweger Uster, \$4,980, **100%** (PI).

1995 (Total = \$25,010)

8. Seed coat neps classification on AFIS. Rotor spinning validation. Zellweger Uster, \$25,010. **100%** (PI).

1997 (Total = \$2,092,988)

9. Improvement of the marketability of the cotton produced in zones affected by stickiness. Common funds for commodities (CFC) – International Cotton Advisory Committee (ICAC), \$2,059,988, **100%** (PI).
10. Software development for High Speed Stickiness Detector. Cotton Incorporated, \$33,000, **100%** (PI).

1997 – Present with Texas Tech University, U.S.A.

Total funded: \$35,217,607 (\$12,425,125 credited to Hequet)

1999 (Total = \$477,459 – Amount credited = \$277,343)

1. A quantitative study of the relative impacts of aphid versus plant sugars on stickiness of cotton in textile processing. Cotton Incorporated TSSC, \$48,000, **3%** (Co-PI).
2. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$14,950, **100%** (PI).
3. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$55,000, **34%** (Co-PI).
4. Distribution of length and strength of cotton fibers and its influence on yarn mechanical properties. USDA/TDA, \$77,000, **100%** (PI).
5. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **100%** (PI).
6. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$56,634, **100%** (PI).
7. Fiber and spinning performance tests on Texas commercial cotton crop. TFFC, \$25,000, **100%** (PI).

8. Investigation of relationships among harvesting, ginning, and textile processes. TFFC, \$17,000, **34%** (PI).
9. Investigation of the measurement and treatment of stickiness and other cotton contaminants. TFFC, \$30,000, **50%** (Co-PI).
10. Molecular genetic optimization of fiber quality. TxCOT, \$135,875, **33%** (Co-PI).

2000 (Total = \$211,625 – Amount credited = \$101,249)

11. Creation of cotton standards for maturity. Cotton Incorporated, \$4,500, **100%** (PI).
12. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$14,950, **100%** (PI).
13. Distribution of length and strength of cotton fibers and its influence on yarn mechanical properties. USDA/TDA, \$2,350, **100%** (PI).
14. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$96,646, **34%** (PI).
15. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$29,179, **50%** (PI).
16. X-ray microtomographic image analysis for identification and measurement of cotton. THECB ATP, \$64,000, **50%**. (Co-PI).

2001 (Total = \$870,653 – Amount credited = \$366,321)

17. Application of new mechanical processing technology to optimize performance of Texas commercial cotton crop. TFFC, \$47,500, **10%** (Co-PI).
18. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$15,525, **100%** (PI).
19. Customized X-Ray microtomographic image analysis for measurement in cotton-based industries. THECB ATP, \$149,987, **40%** (Co-PI).
20. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$52,500, **25%** (Co-PI).
21. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$30,000, **34%** (Co-PI).
22. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$95,887, **60%** (PI).

23. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$36,000, **50%** (PI).
24. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$116,634, **50%** (PI).
25. Evaluation of micro-spinning technology as a tool for guiding improvements in cotton fiber properties. TFFC, \$15,000, **33%** (Co-PI).
26. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$48,835, **50%** (PI).
27. Fiber and spinning performance tests on Texas commercial cotton crop. TFFC, \$55,000, **50%** (Co-PI).
28. Investigation of cotton processing to remove neps, immature fibers and short fibers. TFFC, \$25,000, **34%** (Co-PI).
29. Investigation of relationships among harvesting, ginning, and textile processes. TFFC, \$17,000, **50%** (PI).
30. Investigation of the measurement and treatment of stickiness and other cotton contaminants. TFFC, \$30,000, **34%** (PI).
31. Molecular genetic optimization of fiber quality. TxCOT, \$135,875, **33%** (Co-PI).

2002 (Total = \$319,227 – Amount credited = \$222,746)

32. Creation of cotton standards for maturity. Cotton Incorporated, \$60,083, **100%** (PI).
33. Creation of cotton standards for maturity. Cotton Incorporated, \$3,600, **100%** (PI).
34. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$17,538, **100%** (PI).
35. Development and implementation of fiber and yarn testing protocols for cotton breeders and biotechnologists. Cotton Incorporated, \$30,000, **80%** (PI).
36. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$80,075, **50%** (PI).
37. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$39,974, **50%** (PI).
38. Heritability of fiber length distribution. USDA-ICRC, \$42,500, **100%** (PI).

39. Manipulation of cotton fiber cellulose synthesis. USDA-ICRC, \$45,457, **33%** (Co-PI).

2003 (Total = \$646,179 – Amount credited = \$317,417)

40. Application of new mechanical processing technology to optimize performance of Texas commercial cotton crop. TFFC, \$47,500, **10%** (Co-PI).
41. Creation of cotton standards for maturity. Cotton Incorporated, \$39,993, **100%** (PI).
42. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$20,299, **100%** (PI).
43. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$52,500, **70%** (PI).
44. Development and implementation of fiber and yarn testing protocols for cotton breeders and biotechnologists. Cotton Incorporated, \$30,000, **80%** (PI).
45. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$35,112, **50%** (PI).
46. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **100%** (PI).
47. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **100%** (PI).
48. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$60,000, **50%** (PI).
49. Heritability of fiber length distribution. USDA-ICRC, \$42,500, **100%** (PI).
50. Investigation of cotton processing to remove neps, immature fibers and short fibers. TFFC, \$25,000, **34%** (Co-PI).
51. TAES-TCE joint appointment. TAES-TCE, \$215,275, **7%** (co-PI)

2004 (Total = \$597,012 – Amount credited = \$335,229)

52. Application of new mechanical processing technology to optimize performance of Texas commercial cotton crop. TFFC, \$46,000, **10%** (Co-PI).
53. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$23,184, **100%** (PI).

54. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$45,000, **70%** (PI).
55. Development and implementation of fiber and yarn testing protocols for cotton breeders and biotechnologists. TFFC, \$20,000, **80%** (PI).
56. Effect of alternative crop termination treatments on fiber and yarn quality. Cotton Incorporated TSSC, \$14,000, **100%** (PI).
57. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$36,081, **50%** (PI).
58. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **100%** (PI).
59. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **100%** (PI).
60. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$60,180, **40%** (PI).
61. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$76,253, **100%** (PI).
62. Incorporation of Acala and Pima quality into cotton varieties adapted to the Texas South Plains. USDA-ICRC, \$74,676, **20%** (Co-PI).
63. Texas Plains cotton performance in high value added-ring spinning applications. Cotton Incorporated TSSC, \$30,000, **30%** (Co-PI).
64. Using fiber elongation to improve genetic screening in cotton breeding programs. USDA-ICRC, \$52,938, **10%** (PI).
65. Utilization of wild cottons' for fiber property enhancement. USDA-ICRC, \$40,700, **50%** (Co-PI).

2005 (Total = \$1,051,256 – Amount credited = \$501,419)

66. Acquisition of a Cryo Ultramicrotome. TFFC, \$28,806, **50%** (Co-PI).
67. Application of new mechanical processing technology to optimize performance of Texas commercial cotton crop. TFFC, \$46,000, **10%** (Co-PI).
68. Cotton fabric functionalization using plasma and sol-gel technologies. TFFC, \$50,000, **20%** (Co-PI).

69. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$23,136, **100%** (PI).
70. Development and evaluation of measurements of properties and contaminants for fibers, yarns, and fabrics. TFFC, \$45,000, **70%** (PI).
71. Development and implementation of fiber and yarn testing protocols for cotton breeders and biotechnologists. TFFC, \$20,000, **80%** (PI).
72. Effect of alternative crop termination treatments on fiber and yarn quality. Cotton Incorporated TSSC, \$14,000, **100%** (PI).
73. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$31,292, **40%** (PI).
74. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **75%** (PI).
75. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **75%** (PI).
76. Evaluation of nep formation from mechanical processing of cotton. TFFC, \$40,000, **10%** (Co-PI).
77. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$78,973, **40%** (PI).
78. Evaluation of testing methods for cotton breeders and biotechnologists. TFFC, \$20,000, **80%** (PI).
79. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$31,039, **100%** (PI).
80. Improving the efficiency of the breeding programs for fiber and yarn quality. Cotton Incorporated, \$81,900, **100%** (PI).
81. Incorporation of Acala and Pima quality into cotton varieties adapted to the Texas South Plains. USDA-ICRC, \$79,503, **5%** (Co-PI).
82. Predicting the performance in downstream processes of yarn spun from Texas cotton. TFFC, \$30,000, **10%** (Co-PI).
83. Real-time cotton fiber characterization. Cotton Incorporated. \$70,171, **50%**, (PI).
84. Texas Plains cotton performance in high value added-ring spinning applications. Cotton Incorporated TSSC, \$30,000, **20%** (Co-PI).

85. Textile performance evaluation of selected California cotton varieties. UC Davis, \$118,745, **50%** (Co-PI).
86. Textile performance evaluation of selected High Plains cotton varieties. PCG/PCIC, \$35,000, **50%** (Co-PI).
87. Using fiber elongation to improve genetic screening in cotton breeding programs. USDA-ICRC, \$56,360, **10%**, (Co-PI).
88. Utilization of wild cottons' for fiber property enhancement. USDA-ICRC, \$43,331, **50%** (Co-PI).

2006 (Total = \$4,978,481 – Amount credited = \$478,908)

89. Acquisition of a Cryo Ultramicrotome. TFFC, \$6,168, **50%** (Co-PI).
90. Acquisition of a Cryo Ultramicrotome. TFFC, \$5,800, **50%** (Co-PI).
91. Creation of cotton standards for the AFIS and determination of the procedures allowing the control of the instrument stability. Cotton Incorporated, \$23,482, **100%** (PI).
92. Effect of alternative crop termination treatments on fiber and yarn quality. TFFR, \$12,000, **100%** (PI).
93. Effect of alternative crop termination treatments on fiber and yarn quality. Cotton Incorporated TSSC, \$12,000, **100%** (PI).
94. Establish reliable measurement for stickiness and enable improved management of stickiness in cotton fibers. Cotton Incorporated, \$30,333, **50%** (PI).
95. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **50%** (Co-PI).
96. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **50%** (Co-PI).
97. Evaluation of nep formation from mechanical processing of cotton. TFFC, \$30,000, **10%** (Co-PI).
98. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$87,484, **40%** (PI).
99. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$35,658, **100%** (PI).

100. Functionalization of cotton fabric surface. TDA/FFR, \$35,000, **40%** (Co-PI).
101. ICRC 2006 - International Cotton Research Center Program. USDA-ICRC, \$2,316,600, **3%** (PI).
102. Incorporating fiber elongation in cotton breeding programs. TDA/FFR, \$30,389, **34%** (PI).
103. International center of excellence in agricultural genomics and biotechnology. Emerging technology fund, \$1,949,000, **3%** (Co-PI).
104. Multidisciplinary approach to study cotton fiber maturity. TDA/FFR, \$35,000, **30%** (Co-PI).
105. Predicting the performance in downstream processes of yarn spun from Texas cotton. TDA/FFR, \$27,400, **10%** (Co-PI).
106. Real-time cotton fiber characterization. Cotton Incorporated, \$75,532, **50%** (PI).
107. Textile performance evaluation of selected California cotton varieties. UC Davis, \$118,635, **50%** (Co-PI).
108. Textile performance evaluation of selected High Plains cotton varieties. PCG/PCIC, \$70,000, **50%** (Co-PI).

2007 (Total = \$2,071,057 – Amount credited = \$617,099)

109. A Texas Tech initiative to sequence the cotton genome. TTU VP for Research, \$999,000, **13%** (Co-PI).
110. Data mining in cotton fiber quality databases. Cotton Incorporated, \$35,232, **40%** (PI).
111. Enhancing profit through technologies for mapping quality, yield, and \$/acre in cotton fields. Texas A&M Cropping Systems, \$150,000, **14%** (Co-PI).
112. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TFFC, \$18,000, **50%** (Co-PI).
113. Evaluation of fiber properties for Texas State Cotton breeders. TFFC, \$60,000, **50%** (Co-PI).
114. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$77,957, **40%** (PI).
115. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$100,426, **70%** (PI).

116. ICRC. Texas A&M, \$37,681, **100%** (PI).
117. Imparting antibacterial property to cotton fabric through functionalization with cyclodextrins. TDA/FFR, \$35,000, **30%** (Co-PI).
118. Improving the efficiency of the breeding programs for fiber and yarn quality. Cotton Incorporated, \$90,083, **50%** (PI).
119. Incorporating fiber elongation in cotton breeding programs. TDA/FFR, \$30,389, **34%** (PI).
120. Investigate non-HVI fiber properties and their relationships with fabric quality. DPL, \$19,096, **50%** (PI).
121. Multidisciplinary approach to study cotton fiber maturity. TDA/FFR, \$35,000, **33%** (Co-PI).
122. Nanocoatings for medical applications, textiles, and micro devices. TTU Research Enrichment Fund, \$35,000, **33%** (Co-PI).
123. Real-time cotton fiber characterization. Cotton Incorporated, \$104,398, **50%** (PI).
124. Single fiber strength, crimp, and linear density measurements using FAVIMAT. TDA/FFR, \$18,133, **50%** (PI).
125. Spinning limits of High Quality Upland Cotton. Cotton Incorporated, \$51,782, **70%** (PI).
126. Texas Plains cotton performance in high value-added ring spinning applications. Cotton Incorporated, \$30,000, **20%** (Co-PI).
127. Textile performance evaluation of selected California cotton varieties. UC Davis, \$98,880, **50%** (Co-PI).
128. Textile performance evaluation of selected High Plains cotton varieties. PCG/PCIC, \$45,000, **50%** (Co-PI).

2008 (Total = \$3,383,683 – Amount credited = \$548,036)

129. Data mining in cotton fiber quality databases. Cotton Incorporated, \$35,313, **40%** (PI).
130. Editor-in-Chief Journal of Cotton Science. National Cotton Council, \$7,500, **100%** (PI).
131. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements Cotton Incorporated, \$85,795, **50%** (PI).

132. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$122,218, **70%** (PI).
133. Improving the efficiency of the breeding programs for fiber and yarn quality. Cotton Incorporated, \$110,000, **50%** (PI).
134. Real-time cotton fiber characterization. Cotton Incorporated, \$76,276, **50%** (PI).
135. Spinning limits of High Quality Upland Cotton. Cotton Incorporated, \$81,782, **70%** (PI).
136. Textile performance evaluation of selected California cotton varieties. UC Davis, \$97,104, **50%** (Co-PI).
137. MRI: Acquisition of a Nanocoating system for engineering surfaces. NSF, \$392,857, **10%** (Co-PI).
138. International Cotton research Center Program. USDA-ICRC, \$1,727,556, **4%** (Co-PI).
139. Evaluation of fiber properties for Texas Extension agents' demonstration plots. TDA-FFR, \$18,000, **50%** (Co-PI).
140. Evaluation of fiber properties for Texas State Cotton breeders. TDA-FFR, \$60,000, **50%** (Co-PI).
141. Imparting antibacterial property to cotton fabric through functionalization with cyclodextrins. TDA/FFR, \$35,000, **30%** (Co-PI).
142. Incorporating fiber elongation in cotton breeding programs. TDA/FFR, \$30,389, **34%** (PI).
143. Multidisciplinary approach to study cotton fiber maturity. TDA/FFR, \$35,000, **33%** (Co-PI).
144. Single fiber strength, crimp, and linear density measurements using FAVIMAT. TDA/FFR, \$20,573 **50%** (PI).
145. New water management technologies to sustain rural economies. USDA, \$448,320, **2%** (Co-PI).

2009 (Total = \$2,776,082 – Amount credited = \$706,363)

146. Data mining in cotton fiber quality databases. Cotton Incorporated, \$35,420, **40%** (PI).

147. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements Cotton Incorporated, \$90,794, **50%** (PI).
148. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$100,914, **70%** (PI).
149. Improving the efficiency of the breeding programs for fiber and yarn quality. Cotton Incorporated, \$99,820, **50%** (PI).
150. Real-time cotton fiber characterization. Cotton Incorporated, \$75,110, **50%** (PI).
151. Spinning limits of High Quality Upland Cotton. Cotton Incorporated, \$100,050, **70%** (PI).
152. Improving fiber elongation of U.S. germplasm. Cotton Incorporated, \$22,256, **25%** (PI).
153. Editor-in-Chief Journal of Cotton Science. Cotton Foundation, \$5,000, **100%** (PI).
154. Textile Performance Evaluation of Selected High Plains Cotton Varieties. Plains Cotton Growers Association, \$45,000, **50%** (Co-PI).
155. A Rapid Measurement Method for Studying the Cotton Fibers Secondary Cell Wall Development. Cotton foundation, \$8,000, **30%** (Co-PI).
156. Determination of Individual Fibers Tensile Properties: Relationships with Bundle Strength, Maturity, Length Distribution, and Fiber Breakage. TDA-FFR, \$20,000, **70%** (PI).
157. Evaluation of Fiber Properties for Texas Extension Agents' Demonstration Plots. TDA-FFR, \$18,000, **50%** (PI).
158. Evaluation of Fiber Properties for Texas State Cotton Breeders. TDA-FFR, \$60,000, **50%** (PI).
159. International Cotton research Center Program – 2009. USDA, \$1,619,280, **4%** (Co-PI).
160. Multidisciplinary approach to study cotton fiber maturity. TDA-FFR, \$35,000, **20%** (Co-PI).
161. New Approach to Impart Super-Oleophobic/Hydrophobic Properties for Self-cleaning Cotton Fabrics. TDA-FFR, \$35,000, **20%** (Co-PI).
162. Optimizing the Use of the Advanced Fiber Information System (AFIS). TDA-FFR, \$30,000, **70%** (PI).

163. Evaluation of sensing devices for fabric shrinkage and fabric smoothness measurements. Cotton Incorporated, \$64,914, **50%** (PI).
164. Evaluation of testing methods for cotton breeders and biotechnologists with special emphasis on cotton fiber maturity. Cotton Incorporated, \$100,971, **70%** (PI).
165. Real-time cotton fiber characterization. Cotton Incorporated, \$100,498, **50%** (PI).
166. Spinning limits of High Quality Upland Cotton. Cotton Incorporated, \$110,055, **70%** (PI).
- 2010** (Total = \$2,744,816 – Amount credited = \$496,533)
167. Determination of individual fiber tensile properties: Relationships with bundle strength, maturity, length distribution, and fiber breakage. TDA-FFR, \$16,431, **70%** (PI).
168. Evaluating the performance of Texas cotton in plied ring-spun yarns. Cotton Incorporated – Texas State Support Committee, \$18,000, **20%** (Co-PI).
169. Evaluation of fiber properties for Texas extension agent's demonstration plots. TDA-FFR, \$14,788, **50%** (PI).
170. Evaluation of fiber properties for Texas state cotton breeders. TDA-FFR, \$49,334, **50%** (PI).
171. International Cotton research Center Program – 2010. USDA, \$1,619,280, **8%** (Co-PI).
167. Multidisciplinary approach to study cotton fiber maturity. TDA-FFR, \$28,754, **20%** (Co-PI).
168. New approach to impart super-oleophobic/hydrophobic properties for self-cleaning cotton fabrics. TDA-FFR, \$28,754, **20%** (Co-PI).
169. Optimizing the use of the AFIS. TDA-FFR, \$24,647, **70%** (PI).
170. Spinning limits of high quality upland cottons. Cotton Incorporated, \$13,000, **70%** (PI).
171. Textile performance evaluation of selected High Plains cotton varieties, \$45,000, **50%** (PI).
172. Irrigation termination for improved fiber maturity on the Texas High Plains. Cotton Incorporated – Texas State Support Committee, \$20,000, **50%** (Co-PI).
173. Bayer Project Revolution. Characterization of chitin fibers with improved reactivity. Bayer Corporation, \$758,359, **20%** (Co-PI).

174. Bayer Project Revolution. Development of a micro-spinning protocol to characterize spinning properties of chitin-containing cotton fibers. Bayer Corporation, \$108,469, **90%** (PI).

2011 (Total = \$1,076,606 – Amount credited = \$558,112)

175. Analyzing the effect of drought stress on traits contributing to cotton fiber quality. Cotton Incorporated – Texas State Support Committee, 20,000, **20%** (Co-PI).

176. Improving fiber testing methods for cotton breeders. Cotton Incorporated, \$182,488, **70%** (PI).

177. Moisture management measurement via thermal infrared imaging. Cotton Incorporated, \$63,466, **50%** (PI).

178. Partial funding of purchase of the Cottonscope. Plains Cotton Growers Association, \$25,000, **50%**, (PI).

179. Real-time cotton fiber characterization. Cotton Incorporated, \$101,412, **50%** (PI).

180. Spinning limits of high quality upland cottons. Cotton incorporated, \$142,000, **70%** (PI).

181. Textile performance evaluation of selected High Plains cotton varieties, \$45,000, **50%** (PI).

182. Evaluating the performance of Texas cotton in plied ring-spun yarns. Cotton Incorporated – Texas State Support Committee, \$20,000, **20%** (co-PI).

183. Spectroscopic approach to study cotton fiber maturity. Cotton Incorporated – Texas State Support Committee, \$35,000, **20%** (co-PI).

184. Research to Advance the Quality and Competitiveness of Texas Cotton Fibers. TDA-FFR, \$180,000, **39%** (Co-PI).

185. Bayer Project Revolution. Development of a Micro-spinning Protocol to Characterize Spinning Properties of Chitin-containing Cotton fibers. Phase II – Dye Uptake. Bayer Corporation, \$247,507, **50%** (Co-PI).

186. Marketing Research for the Commercial Development of a Machine Vision System for Simultaneous Measurement of Stain Release and Shrinkage in Fabrics. TTU Commercial Development Grant awards, \$13,733, **33%** (Co-PI)

2012 (Total = \$1,865,796 – Amount credited = \$1,388,904)

187. Effect of within-plant variability on fiber quality and spinning performances. Cotton Incorporated, \$211,511, **80%** (PI).
188. Establishing a set of reference cottons for the simultaneous measurements of length and maturity. Cotton Incorporated. \$221,048, **50%** (PI).
189. Improving fiber testing methods for cotton breeders. Cotton Incorporated. \$330,486, **80%** (PI).
190. Moisture management measurement via thermal infrared imaging. Cotton Incorporated. \$150,564, **50%** (PI).
191. Improving the marketability of U.S. cottons: Building elite populations for improved non-HVI fiber properties (Phase I). Texas Research Incentive Program. \$95,117, **100%** (PI).
192. Improving the marketability of U.S. cottons: Building elite populations for improved non-HVI fiber properties (Phase II). Texas Research Incentive Program. \$559,136, **100%** (PI).
193. Textile performance evaluation of selected High plains cotton varieties. Plains Cotton Growers Association. \$45,000, **50%** (PI).
194. Validation of the Cottonscope. Cotton incorporated. \$100,934, **80%** (PI).
195. New Cropping Systems. Texas A&M AgriLife, \$150,000, **6.7%** (Co-PI).

2013 (Total = \$628,170 – Amount credited = \$504,735)

196. Effect of within-plant variability on fiber quality and spinning performances. Cotton Incorporated, \$105,501, **80%** (PI)
197. Establishing a set of reference cottons for the simultaneous measurements of length and maturity. Cotton Incorporated. \$83,469, **50%** (PI)
198. Improving fiber testing methods for cotton breeders. Cotton Incorporated. \$190,499, **80%** (PI)
199. Elucidating the impact of fiber maturity on fiber length distribution and fiber breakage. Cotton Incorporated. \$80,201, **100%** (PI)
200. Textile performance evaluation of selected High plains cotton varieties. Plains Cotton Growers Association. \$45,000, **50%** (PI).

201. Evaluation of fiber properties for Texas cotton breeders. Fibers Initiative. \$90,000, 100% (PI).
202. Evaluation of fiber properties for extension agents. Fibers Initiative. \$12,000, 100% (PI).
203. Evaluate new tools that could be beneficial for cotton breeders and develop breeder specific models to predict yarn quality. Fibers Initiative. \$21,500, 100% (PI).

2014 (Total = \$616,158 – Amount credited = \$371,614)

204. Effect of within-plant variability on fiber quality and spinning performances. Cotton Incorporated, \$111,579, **51.6%** (PI)
205. Improving fiber testing methods for cotton breeders. Cotton Incorporated. \$160,254, **50%** (PI)
206. Elucidating the impact of fiber maturity on fiber length distribution and fiber breakage. Cotton Incorporated. \$80,644, **50%** (PI)
207. Textile performance evaluation of selected High plains cotton varieties. Plains Cotton Growers Association. \$45,000, **50%** (PI).
208. Evaluation of fiber properties for Texas cotton breeders. Fibers Initiative. \$90,000, 100% (PI).
209. Evaluation of fiber properties for extension agents. Fibers Initiative. \$12,000, 100% (PI).
210. Evaluate new tools that could be beneficial for cotton breeders and develop breeder specific models to predict yarn quality. Fibers Initiative. \$21,500, 100% (PI).
211. Purchase of a sample ginning system. Plains Cotton Growers Association. \$15,000, **50%** (PI).
212. Elucidating the impact of processing on fiber elongation. Cotton Incorporated. \$80,181, **50%** (PI)

2015 (Total = \$873,443 – Amount credited = \$423,335)

213. Elucidating the impact of fiber maturity on fiber length distribution and fiber breakage. Cotton Incorporated. \$80,080, **50%** (PI)
214. Elucidating the impact of processing on fiber elongation. Cotton Incorporated. \$80,080, **50%** (PI)

215. Improving the utility of fiber quality parameters as a screening tool in breeding programs. Cotton Incorporated, \$105,166, **50%** (PI)
216. Cochran Program on Cotton Quality, Grading, and standards (Pakistan). USDA-FAS, \$24,465, **10%** (co-PI)
217. Improving the utilization of cotton fiber length distribution in breeding programs. Cotton Incorporated. \$160,152, **50%** (PI)
218. Textile performance evaluation of selected High plains cotton varieties. Plains Cotton Growers Association. \$45,000, **25%** (PI)
219. Project Revolution: Improving TTU Cotton Research Infrastructures. \$180,000 (year 1 only), 33% (co-PI)
220. Project Revolution: Improving tensile properties of cotton. \$75,000 (year 1), 33% (PI)
221. Evaluation of fiber properties for Texas cotton breeders. Fibers Initiative. \$90,000, 100% (PI)
222. Evaluation of fiber properties for extension agents. Fibers Initiative. \$12,000, 100% (PI)
223. Evaluate new tools that could be beneficial for cotton breeders and develop breeder specific models to predict yarn quality. Fibers Initiative. \$21,500, 50% (PI)
- 2016** (Total = \$1,530,959 – Amount credited = \$676,247)
224. Elucidating the impact of fiber maturity on fiber length distribution and fiber breakage. Cotton Incorporated. \$80,016, **50%** (PI)
225. Elucidating the impact of processing on fiber elongation. Cotton Incorporated. \$80,026, **50%** (PI)
226. Improving the utility of fiber quality parameters as a screening tool in breeding programs. Cotton Incorporated, \$105,021, **50%** (PI)
227. Enhancing the marketability of U.S. cotton through length uniformity improvement. Cotton Incorporated. \$200,032, **50%** (PI)
228. Maturity and Standard Fineness: determination, calibration, and use. Cotton Incorporated. \$160,029, **34%** (PI)
229. CIF: Improving fiber length uniformity through breeding. Cotton Incorporated. \$30,000, **50%** (PI)

230. Textile performance evaluation of selected High plains cotton varieties. Plains Cotton Growers Association. \$135,000, **38.3%** (PI)
231. Project Revolution: Improving TTU Cotton Research Infrastructures. \$180,000 (year 2 only), 33% (co-PI)
232. Project Revolution: Improving tensile properties of cotton. \$95,000 (year 2 only), 33% (PI)
233. Project Revolution: Assessing the Seed Coat Fragments Potential of Bayer Germplasm. \$200,000, 33% (PI).
234. Project Revolution: Enhancing the marketability of U. S. cotton through length uniformity improvement. \$200,000, 50% (PI).
- 2017** (Total = \$1,049,576 – Amount credited = \$453,933)
235. Elucidating the impact of fiber maturity on fiber length distribution and fiber breakage. Cotton Incorporated. \$80,016, 50% (PI)
236. Improving the utility of fiber quality parameters as a screening tool in breeding programs. Cotton Incorporated, \$105,671, 50% (PI)
237. Enhancing the marketability of U.S. cotton through length uniformity improvement. Cotton Incorporated. \$200,984, 50% (PI)
238. Maturity and Standard Fineness: determination, calibration, and use. Cotton Incorporated. \$160,032, 34% (PI)
239. Enhancing the marketability of U.S. cotton through length uniformity improvement. Budget increase. Cotton Incorporated. \$7,873, 50% (PI)
240. CIF: Improving fiber length uniformity through breeding. Cotton Incorporated. \$50,000, 50% (PI)
241. Textile performance evaluation of selected High plains cotton varieties. Plains Cotton Growers Association. \$45,000, 25% (co-PI)
242. Assessing the Seed Coat Fragments Potential of Bayer Germplasm. Project Revolution. \$200,000, 33% (PI).
243. Enhancing the marketability of U. S. cotton through length uniformity improvement. \$200,000, 50% (PI).

2018 (Total = \$6,079,510 – Amount credited = \$1,994,962)

- 244. Elucidating the impact of fiber maturity on fiber length distribution and fiber breakage. Cotton Incorporated. \$80,018, 50% (PI)
- 245. Improving the utility of fiber quality parameters as a screening tool in breeding programs. Cotton Incorporated, \$105,559, 50% (PI)
- 246. Enhancing the marketability of U.S. cotton through length uniformity improvement. Cotton Incorporated. \$200,015, 40% (PI)
- 247. Maturity and Standard Fineness: determination, calibration, and use. Cotton Incorporated. \$160,418, 34% (PI)
- 248. CIF: Improving fiber length uniformity through breeding. Cotton Incorporated. \$50,000, 50% (PI)
- 249. Textile performance evaluation of selected High plains cotton varieties. Plains Cotton Growers Association. \$56,500, 25% (co-PI)
- 250. Enhancing the marketability of U. S. cotton through length uniformity improvement. Project Revolution. \$200,000, 50% (PI).
- 251. Suitability of Ethiopian Cotton Fiber for Producing Quality Ring Spun Yarn. Bahir Dar University, Ethiopia. \$30,000, 100% (PI).
- 252. Valuation of Products and Materials for Fiber Conditioning Research. Samuel Jackson Incorporated. \$197,000, 50% (co-PI).
- 253. State of Texas Governor's University Research Initiative (*GURI*). Application for Distinguished Researcher Dr. Luis Rafael Herrera-Estrella. Office of the Governor. \$5,000,000, 30% (co-PI).

2019 (Total = \$445,539 – Amount credited = \$445,539)

- 254. Enhancing the marketability of U.S. cotton through length uniformity improvement. Cotton Incorporated. \$150,000. 100% (PI).
- 255. Maturity and standard fineness: determination, calibration, and use. Cotton Incorporated. \$160,010. 100% (PI).
- 256. Establish the suitability of US cotton for Vortex spinning. Cotton Incorporated. \$135,529. 100% (PI).

2020 (Total = \$1,338,859 – Amount credited = \$1,052,320)

- 257. Exploring alternatives to the current HVI classification system. USDA AMS. \$924,320 – 69% (PI).
- 258. Enhancing the marketability of U.S. cotton through length uniformity improvement. Cotton Incorporated. \$150,000. 100% (PI).
- 255. Maturity and standard fineness: determination, calibration, and use. Cotton Incorporated. \$154,510. 100% (PI).
- 256. Establish the suitability of US cotton for Vortex spinning. Cotton Incorporated. \$110,029. 100% (PI).