

Tracey D. Carrillo, Ph.D.

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EDUCATION

PhD, Agronomy, New Mexico State University, Las Cruces, NM, 2006

MS Entomology, Plant Pathology and Weed Science NMSU, Las Cruces, NM, 1988

BS Rangeland Management/Wildlife Sciences, Sul Ross State University, Alpine, TX, 1985

Expert Witness - Pro Ag Consultants – <http://proagconsultants.com>

Litigation Expert, 1996 - Present

- Provide expert opinion and testimony on agronomic, soil fertility, pesticides including herbicides, insecticides, fungicides, plant breeding, seed certification
- NEPA and FIFRA, state and federal compliance, Texas
- Pesticide misuse on cotton for boll weevil control, Texas.
- Pheromone disruption applications in cotton, New Mexico.
- Fungicide causes and effects of peach pitting, California.
- Herbicide damage to melons with drip systems, Arizona.
- Powdery mildew product efficacy on watermelons, Arizona.
- Tomato spotted wilt disease on Tomatoes, Arkansas.
- Fungicide resistance on cucurbits, Georgia.
- Effects of herbicide overspray on vineyards, Minnesota.
- Herbicide misuse on wetland non targets for invasive weed control, Nevada.
- Evaluate reasons for crop failure of corn, Kansas.
- Herbicide contaminated fertilizer, Oklahoma.
- Turf grass on race track issues, Florida.
- Herbicide Aminopyralid cross contamination tobacco, Kentucky.
- Herbicide carryover in manure, tobacco, Kentucky.
- Aminopyralid over spray to non target crops, tobacco, North Carolina.
- Non label use of an acidifier for fungicide applications, watermelons, Texas.
- Application of contaminated herbicides to nonGMO soybeans, Michigan.
- Mismanagement of soil fertility services, corn, Nebraska.

ACADEMIC/EMPLOYMENT EXPERIENCE

Administrator, Assistant Director of Campus Farm Operations, New Mexico State University, Agricultural Experiment Station, Las Cruces, Present

- Direct operations of two experiment science centers and campus agricultural lands
- Director and provide oversight for Seed Certification programs (Peppers, Pecans, Cotton, Alfalfa, Corn, as well as many other crops).
- Collaborate and provide services to more than 30 faculty members, including fertility, breeding and pesticide programs on various cropping systems at science centers

- Direct operations of campus agricultural experiment stations, facilities, personnel research, agronomic and animal science facilities
- Manage budgets, funding opportunities, research projects in multiple cropping systems and animal livestock facilities
- Develop operations plans for new innovative research projects such as; variety trials, experimental design, biofuels, solar energy, varietal plant improvements, nutrient and water efficiency studies, herbicide and pesticide evaluation
- Serve as the point person to channel all efforts and directives for campus science center related issues

Faculty, Director of Seed Certification Program, New Mexico State University, Extension Plant Sciences, Las Cruces, NM, November 2007-2009.

- Oversee all aspects of; Seed Certification for the state of NM, field inspections for certification of Noxious Weed Free Forage program, compliance with regulations of the Insect Resistance Management (IRM) program for GMO's, act as a verifier for Carbon Credits compliance in NM.
- Chair the New Mexico Cotton Task Force
- Organized the 2009 Cotton Conference
- Manage budgets, and all operations of programs throughout the state.
- Inspect and approve forage and seed crops for certification.
- Work collectively with New Mexico Department of agriculture to maintain the genetic quality of foundation and improved varieties of seed.
- Facilitate regulations and guidelines for seed production and certification.
- Interact with growers, field men and processors to educate, inform and collaborate with, and to comply with standards set by NM seed law.
- Work closely with an advisory committee to best utilize the programs strengths.
- Also see my Plan of Work at <http://pow.nmsu.edu>, search specialist.

Senior Research Specialist, New Mexico State University, Entomology, Plant Pathology and Weed Science Department, Las Cruces, NM, September 1989 – 2007.

- Conduct all field and lab research in cotton, pecans, alfalfa, chile and others.
- Teach, mentor, train, undergraduate and graduate students in research efforts.
- Supervise masters and doctoral students' thesis work and professional staff.
- Promote, research findings through extension and publication, and various avenues.
- Lead and conduct all field and lab research, design, implementation and reporting.
- Manage budgets, salaries, equipment, supplies, and miscellaneous expenses.
- Write and submit proposals, journal articles and publications.
- Instructor and guest lecturer for undergraduate and graduate courses.
- Participate on student mentoring and recruitment programs and committees.

Research Specialist, New Mexico State Agricultural Experiment Station, Clovis NM 1988-1989.

- Supervise field, lab technicians, and laborers.
- Conduct research studies on variety trials for various agricultural crops.
- Set up water conservation and irrigation scheduling sustainable systems.

- Evaluate no-till cropping systems for fertilizer and pesticide leaching capacity.
- Evaluate various pesticide trials on corn, wheat and vetch crops.
- Run nitrogen studies on no-till production systems.

Graduate Research Assistant, New Mexico State University Veterinary Entomology Research Laboratory, February 1986-1988.

- Evaluated disease transmission by horse flies and deer flies to Elk in National forest.
- Experimented with delivery system of injectable medications on big horn sheep.
- Care and maintenance of wildlife facilities.
- House Flies studies at dairy installations.
- Manure mediation and disposal.

Research Technician, Texas A&M Agriculture Experiment Station, Ft. Stockton Texas 1984-1985.

- Germplasm maintenance, propagation, and greenhouse management.
- Center pivot and row irrigation studies under arid land conditions.
- Performed laboratory operations, rubber/resin analysis of Guayule.
- Supervision of laborer and farm management operations.

Range Conservationist, Soil Conservation Service, Alpine Texas, 1983-1984.

- Analysis of rangeland forage condition. Plant/soil interrelationships.
- Field specialist for area ranchers, sustainable range production and conservation.
- Surveying and photographic mapping of rangeland.
- Soil classification, plant identification, hydrology management and stocking rate.

Rangeland Lab Instructor, Sul Ross State University, 1982-1984.

- Class instruction for the identification of major forbs grasses and woody species.
- Supervision of the herbarium; plant collection, identification, and preservation.
- Wildlife and range field work, controlled burns of rangeland.

COURSES Instructed

Undergraduate/Graduate

- Biological Control
- Integrated Pest Management
- Economic Entomology
- Range Plant Identification

Guest Lecture

- Organic production
- Intro to Entomology
- Plant Disease Diagnosis
- Seminar

COLLABORATIVE / COMMERCIALIZED EFFORTS

- Developed collaborative efforts to commercialized research findings for variable nutrient rate fertilizer technology to create sustainable systems with various divisions.
- Designed and developed grower outreach programs to incorporate research findings

and extend public relations.

RECENT REFEREED PUBLICATIONS/PROCEEDINGS

Refereed

- Carrillo, T., Idowu, J., Ashigh, J., and Hamilton, C. 2011. Pesticide and Integrated Pest Management Guidelines for New Mexico Cotton Growers. Institute for Energy & the Environment.
- Carrillo, T., J. Drake, J. Pierce, and J. Ellington. 2007. Nitrogen as a contributor to phytophagous insect density in Acala cotton 1517-99, *Gossypium hirsutum* (L). J. Crop Management (Submitted).
- Carrillo, T., Drake, J. and Ellington, J. 2007. Interactions Associated with Normalized Difference Vegetative Index, Arthropod Density and Water / Nitrogen Responses in Acala Cotton 1517-99, *Gossypium hirsutum* (L). Southwest. Entomol. (Submitted).
- Carrillo, T., J. Lillywhite, J. Drake, J. Pierce, and J. Ellington. 2007. An economic approach to fertilizer management on cotton and its effects on *Lygus* density. J. of Econ. Entomol. (Submitted).
- LaRock, D.R., Z. Mirdad, and J.J. Ellington. 2003. Control of green peach aphids *Myzus persicae* with lady beetles *Harmonia axyridis* (Pallus) on chile *Capsicum annum* L. in the greenhouse. Southwest. Entomol. Pp. 28:249-253.
- Pierce, J.B., J.J. Ellington, E. Kirk and T. Carrillo. 2002. Plant population, planting date and cotton variety impact on early squaring and development of a trap crop for pink bollworm (Lepidoptera: Noctuidae). J. Entomol. Sci. 37:219-226.
- Bowers, J.P., Carrillo, T.D., Ellington, J.J., Richman, D.B. 1997. Recovery of *Apanteles angaleti* (Muesebeck) from *Pectinophora Gossypiella* (Saunders) in the Mesilla Valley, Dona Ana, New Mexico. Southwestern Entomologist. 23:91-92.
- Joe Ellington, Morris Southward, Tracey Carrillo. 1997. Association Among Cotton Arthropods. Environmental Entomol. Pest Management and Sampling. Vol. 26, no. 5.
- Carrillo, J.R., T. D., Carrillo, and J.J., Ellington. 1994. Evaluation of pesticide resistance in *Anaphes iole* collected from five locations in the western United States. Southwest. Entomolo. 19: 157- 160.
- Ellington, J.J., Carrillo, T.D., Larock, d. and Abd-Elsalam, A.H. 1994. Biological control of pecan insects in New Mexico 1994. Hort. Technology pg. 126-130.

Proceedings/Bulletins/Circulars

- Ellington, J.J., T. Carrillo, J. White, C. Sutherland, and D. Richman. 2005. Guide to the biological control of some common yard and garden pest insects in New Mexico. New Mexico Circular 607.
- Richman, D.B., J. Drake, T. Carrillo, and J.J. Ellington. 2005. A color key to the common spiders found in alfalfa and cotton in New Mexico. New Mexico Circular.
- Ellington, J.J. and T. Carrillo. 2003. Black Aphid Control. XXXVIV Annual Western Pecan Conference Proceedings.
- Ellington, J.J. and T. Carrillo. 2002. Integrated biological control of cotton insets in New Mexico. International Cotton Pest Work Committee. Mazatlan, Mexico.

Proceedings.

- Carrillo, T.D., D. LaRock, A.H. Abd El-Salam, J.J. Ellington. 1994. Evaluation of beneficial insects for control of pecan pests. 28th Western Pecan Conference Proceedings.
- Carrillo, T.D., J.J. Ellington. 1994. Sampling, counting and modeling insect populations in cotton ecosystems. XXIX Congreso Nacional De Entomologia Proceedings. Monterrey, Mexico.
- Ellington, J.J., T.D., Carrillo. 1994. A computer assisted recognition system for cotton. Proceedings for National Cotton Council Beltwide Conference in San Diego.
- Ellington, J.J., A. Amin., Z., Sawiers. T.D., Carrillo. 1994. A comparison of three sampling methods for a arthropods in cotton in New Mexico. Proceedings for National Cotton Council Beltwide Conference in San Diego.
- Ellington, J.J., A. Amin., Z., Sawiers. T.D., Carrillo. 1994. A comparison of dispersion and regression indices for *Heliothis* spp. in cotton in New Mexico. Proceedings for National Cotton Council Beltwide Conference in San Diego.
- Richman, D.B., Dean, D.A., Carrillo, T.D., Ellington, J.J., Sarabia and Schneider, P.K. A computer- aided key to the spiders in Egyptian cotton fields. American Arachnological Society National Meeting. University of Florida. 1994.

GRANT FUNDING – Managed Grants

- Cotton Incorporated “Develop a Biofuel Processing Plant” 2012, \$130,000
- Cotton Incorporated “Precision Agriculture” 2007, \$15,000.
- Conservation Innovation Grant”, 2007, \$75,000.
- Cotton Incorporated “Biological Control” 2007, \$3,000.
- WERC “Reducing Environmental Damage of Pesticides”, 2006, \$74,000.
- WERC “Reducing Environmental Damage of Pesticides”, 2005, \$65,000.
- USDA “Southwest Pecan Research” 2005, \$74,000.
- Cotton Incorporated “Cotton Research”, 2004, \$15,000.
- EPA “Biological Control Studies”, 2003, \$143,000.
- Donations and Fund Raising for Charitable Community Service”, 2007, \$500,000.

INVITED POSTER/SEMINAR PRESENTATIONS

- Chile Field Day Leyendecker Plant Science Center” Precision Variable Rate Fertilizer Applications” 2006.
- Beltwide Cotton Conference San Antonio, Texas. “Normalized Difference Vegetative Index, Arthropod Density and Water / Nitrogen Interactions in Irrigated Acala 1517-99 Cotton, *Gossypium hirsutum* (L).” 2006.
- New Mexico Cotton Conference. Variable Rate Nitrogen Fertilizer Application with Precision Technology. Ruidoso, NM 2006.
- National Beltwide Cotton Conference, New Orleans, LA. Poster presented. “Associations of Normalized Difference Vegetative Index (NDVI), Arthropod Density, Plant Architecture and Agronomic Diversity in Acala 1517 Cotton” 2005.
- New Mexico Crop Production Association Meeting. Ruidoso, New Mexico. Poster presented. “Reducing insecticide, nitrogen and water use in western cotton production with precision agriculture” 2005.
- Regional Cotton Conference. Ruidoso, New Mexico. Paper entitled “Using infrared

Reflectance to Measure Water / Nitrogen Deficits and Lygus Density in Acala 1517 Cotton” 2005.

- Southwest Entomological Society meeting. Paper entitled “Interactions Associated with Normalized Differential Vegetative Index, Arthropod Density and Water / Nitrogen Responses in Acala 1517-99 Cotton, *Gossypium Hirsutum* (L). 2005”
- Issue of ACRES magazine. Vol. 35, NO. 3, “New Weapons in the Insect War”. Developments & Discoveries in Biocontrol. Agricultural Field Day, 2005.
- Agronomy course instruction. Ag Horticulture 331 Honours class presentation. Organic, biological control and ecological preservation presentation WERC funded.

RESEARCH INTERESTS

- Production Optimization of Cropping Systems.
- Water Conservation and Sustainability.
- Soil, Plant, Nutrient, Relationships.
- Fertility Cause and Effects for Increase Profits.
- Extension Education and Sustainability.
- Biofuel, Organic, and Sustainable Production Systems.

SERVICE – PROFESSIONAL/COMMUNITY

Professional Affiliations

- Member Sigma-Xi Scientific Society, 1998 – *present*.
- Member Pecan Growers Association, 1990 – *present*.
- Member Cotton Growers Association 1990 – *present*.
- Member Student Recruitment Committee 2006 – *present*.
- Member of Board of Directors Cowboys for Cancer Research 2003-*present*.
- Member Plant Management Network, 2007.