

## LON R. SHELL

### SCHOLARSHIP

#### Selected Publications, Presentations, Grants and Consulting

#### PUBLICATIONS (Papers and Articles)

- F.M. Zoz, R.J. Turner, L. R. Shell, 2002. *Power Delivery Efficiency: A Valid Measure of Belt / Tire Tractor Performance?* Transactions of the ASAE Vol. 45(3):509-518(2002) American Society of Agricultural Engineers.
- Shell, L.R., *Power Measurement*, 2002 EAFE, Encyclopedia of Agricultural and Food Engineer.
- Shell, L.R., F.M. Zoz, and R. Turner, 1997. Field Performance of Rubber Belt and MFWD Tractors in Texas Soils. SAE Paper 972729, *Belt and Tire Traction in Agricultural Vehicles ME SP-1291*, SAE (Society of Automotive Engineers)
- Turner,R., L.R. Shell and F.M, Zoz 1997. Field Performance of Rubber Belt and MFWD Tractors in Southern Alberta Soils, SAE Paper 972730. *Belt and Tire Traction in Agricultural Vehicles SAE SP-1291* SAE (Society of Automotive Engineers) International. 1997
- Shell, L.R. and R.M. Fox, 1993. Tractor analysis - multiprocessor data telemetry system. ASAE Paper No. 9311010. ASAE, (American Society of Agriculture Engineers) St. Joseph, MI 49085-9659
- Fox, R.M., L.R. Shell and A.W. Batey, 1990. Microprocessor instrumentation for maximizing tractor performance (MICRO-MAX). ASAE Paper No. 901512. ASAE, St. Joseph MI 49085-9659.1990.
- Shell, L.R- "How to Get the Most From Your Front Wheel Drive Tractor", Texas Young *Farmer Magazine*, pp. 3-6. Summer, 1990.
- Shell, L.R. and AW. Batey, 1987. Front wheel assist tractor ballasting analysis. ASAE Paper No. 87-1628. ASAE, St. Joseph, MI 49085-9659..
- Shell, L.R., R. Fox, and K. Moss, 1986. Comparative evaluation of FWDA to two-wheel drive tractors. ASAE Paper No. 86-1067. ASAE, St. Joseph, MI 49085-9659. Results of study were quoted in numerous Magazines.
- Shell, L.R., and R, Collins, 1986. Field-Transferable Instrumentation package For Tractor Performance Comparisons. *Journal of Agricultural Mechanization Vol. 1 (2): 24-29 (TACTAM)* Texas Association of College Teachers of Agricultural Mechanization. 1986.
- Collins, J.R., and L.R. Shell, 1985. Transferable diesel fuel flow instrumentation module for tractor performance comparisons. *The Journal of Agricultural Mechanization* 1(1): 16-21. (TACTAM) Texas Association of College Teachers of Agricultural Mechanization. 1985.
- Shell, L.R. and J.R. Collins, 1985. Field-transferable instrumentation package for tractor performance comparisons, (F-TIP). SAE Paper No. 851525, SAE, Warrendale, PA 15096-0001.

## **PRESENTATIONS (papers)**

- Paper submitted for presentation by Frank Zoz, John Deere product engineer at ASAE/CSAE-SCGR 1999 Annual International Meeting, July 18-21, Toronto, Ontario, Canada. Zoz F.M. and L.R. Shell. Power Delivery Efficiency - A Valid Measure of Belt/Tire Tractor Performance. ASAE Paper
- Paper presented at the 1997 SAE International Off-Highway & Powerplant Congress & Exposition, Wisconsin Center, Milwaukee, WI., September, 1997 - Shell, L.R., F.M. Zoz, and R. Turner, 1997. Field Performance of Rubber Belt and MFWD Tractors in Texas Soils. SAE Paper 972729, *Bell and Tire Traction in Agricultural Vehicles ME SP-1291*, SAE (Society of Automotive Engineers)
- Paper Presented - Shell. Lon R., "Tractor Efficiencies". *Proceedings of the Texas Association of College Teachers of Agricultural Mechanics, 1986*, Texas Section of ASAE, Galveston, TX Presentation made to Texas Section, Galveston, TX 1986.
- Presentation given at Texas Folklore Society, Texas A&I, Kingsville, TX. April, 1990. Shell, L.R., 1990. "By Their Pickups Ye Shall Know Them"
- Paper presented at the 1993 International Summer Meeting of the American Society of Agricultural Engineers and the Canadian Society of Agricultural Engineering, Spokane Center, Spokane, WA. June, 1993 - Shell, L.R. and R.M. Fox, 1993. Tractor analysis - multiprocessor data telemetry system. ASAE Paper No. 9311010. ASAE, (American Society of Agriculture Engineers) St. Joseph, MI. 49085-9659
- Paper presented at the 1987 Winter Meeting of the American Society of Agricultural Engineers, Hyatt Regency, Chicago, IL, December, 1987 - Shell, L.R. and AW. Batey, 1987. Front wheel assist tractor ballasting analysis. ASAE Paper No. 87-1628. ASAE, St. Joseph, MI 49085-9659.
- Paper presented at the 1986 Summer Meeting of American Society of Agriculture Engineers, California Polytechnic Institute, San Luis Obispo, CA. June, 1986. - Shell, L.R., R. Fox, and K. Moss, 1986. Comparative evaluation of FWDA to two-wheel drive tractors. ASAE Paper No. 86-1067. ASAE, St. Joseph, MI 49085-9659.
- Paper presented at 1985 SAE International Off-Hiway & Powerplant Congress & Exposition. Wisconsin Center, Milwaukee, WI. September, 1985. - Shell, L.R. and JR. Collins, 1985. Field-transferable instrumentation package for tractor performance comparisons, (F-TIP). SAE Paper No. 851525, SAE, Warrendale, PA 15096-0001.

## **CONTRACTS AND GRANTS**

### **National and State**

- Shell, L.R. and P.W. McKee, "Soil Compaction Caused by Wheeled Tractor Compared to Rubber Track Tractor", Houston Livestock Show and Rodeo Grant. \$6700 (2002)
- Shell, L.R. and D. Carson. National Science Foundation ILI - IP matching grant, "Linking Agricultural Curricula with Global Position (GPS) Total Station". \$80,674 (1995 - 97)
- Shell, L.R., "Agricultural Energy Efficiency-Optimizing Tractor Performance", Governor's Energy Office, \$108,595 (1992 - 1994). Conducted three day Tractor Performance Clinics throughout the state in partial fulfillment of Governor's Energy Office Grant. Clinics conducted included, Rio Farms at Edinburg, clinics at

Ballinger, Pleasanton, Victorial Farm Show, Lulling Foundation Field Days, Sam Houston State University, Huntsville, New Braunfels Young Farmers and Farmer Stockman Show, Lubbock.

## **CONSULTING**

- Shell, L.R., Consulting Editor, *Engines FOS*, Fundamentals of Service, John Deere Publications. 1999.
- Shell, L.R, Consulting Editor, *Electronic and Electrical Systems, FOS*, Fundamentals of Service, John Deere Publications. July, 1993
- John Deere – assisted Reed Turner with the Farm Machinery Research Center (AFMRQ in conducting Field Test to compare power and performance of MFWD and Belted Tractors on Texas Soils. (1998)
- McAllen Schools – Mike Barrera Vocational Director, Safety and Liability in Public School Laboratory Systems 1998.
- John Deere - Conducted Field Test in San Marcos. Field Performance of Rubber Belt and MFWD Tractors in Texas Soils, John Deere Corp. (1996)
- John Deere - Conducted Field Test in Alberta Canada at AFMRC. Field performance of Rubber Belt and MFWD Tractors in Southern Alberta Soils, Canada, John Deere Corp. Three students accompanied Dr. Shell to Canada to assist in Field tests. (1996) Data developed from these field test were used to develop John Deere Sales Brochure *Sign of the Right Choice*
- Pleasanton Schools Career and Technology Department - Laboratory Safety and Organization. Presentation made to Pleasanton ISD Career and Technology Teachers. (1995)
- Wharton School District, for design of Agriculture Mechanics Laboratory. Prepared Educational Specifications. (1992)
- Tom Harring, Thermon Corp. on design and testing of new energy efficient engine. (1991)
- Dr. Paul Fonteyne, SWT Biology Department, Design of River Vegetation Harvester for city of San Marcos. (1991)
- Lanier High School - Evaluation of Technology Programs, , Austin, 1983.
- Consultant to San Antonio Schools Vocational Laboratory Management Systems, 1982.