

CURRICULUM VITAE

Naveen Puppala

1. Position

Title: College Professor
Agency: New Mexico State University
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2. Education

B.S., 1987. Andhra Pradesh Agricultural University, A.P. India (Crop Science)
M.S., 1990. Tamil Nadu Agricultural University, T.N. India (Agronomy)
Ph.D., 2003. New Mexico State University, N.M. USA (Agronomy)

3. Area of Specialization

Plant Breeding

4. Professional Experience

2017 – Present, College Professor, Agricultural Science Center at Clovis, New Mexico State University.
2009 – 2017, College Associate Professor, Agricultural Science Center at Clovis, New Mexico State University.
2003- 2009, College Assistant Professor, Agricultural Science Center at Clovis, New Mexico State University.
1999-2003, Agriculture Specialist, ASC at Clovis, New Mexico State University.
1996-1999, Specialist, Dept. of Agronomy, New Mexico State University.
1992-1995, Research Asst. Dept. of Agronomy, New Mexico State University.
7/92-8/92, Consultant, ICRISAT, Legumes Program, Patancheru, India.
8/91-6/92, Research Associate, ICRISAT, Resource Management Program.

5. Research Interests

My present research focuses on peanut Valencia breeding with emphasis on variety development for high yield; four seeds per pod; good taste and disease resistance using molecular techniques and conventional breeding approaches.

6. Peer Reviewed Journal Articles (Recent 2013-2017)

1. Thuo, M., A. Bell, B.E. Bravo-Ureta., D.K. Okello., N. Okoko., N. Kidula., C. Deom, and **N. Puppala**. 2013. Social Network Structures among Groundnut

- Farmers. *Journal of Agricultural Education and Extension* 19):339-359.
<http://dx.doi.org/10.1080/1389224X.2012.757244>
2. Htoon, W., W. Kaewpradit, S. Jogloy, N. Vorasoot, B. Toomsan, C. Akkasaeng, **N. Puppala**, and A. Patanothai. 2013. Responses of Peanut (*Arachis hypogaea* L.) Genotypes to N₂-Fixation under Terminal Drought and Their Contributions to Peanut Yield. *SABRAO Journal of Breeding and Genetics* 45:296-310.
 3. Htoon, W., W. Kaewpradit, S. Jogloy, N. Vorasoot, B. Toomsan, C. Akkasaeng, **N. Puppala**, and A. Patanothai. 2013. Relationships between Root Traits and Nutrient Uptake and Nitrogen Fixation in Peanut under Terminal Drought. *SABRAO Journal of Breeding and Genetics* 45:311-322.
 4. Chari Venkatkrishna Kandala, Ramesh Avula, Vijayasradhi Settaluri, Ronda Srinivasa Reddy, **N. Puppala**. 2013. Sensing the Moisture Content of Dry Cherries—A Rapid and Nondestructive Method. *Food and Nutrition Sciences* 4:38-42.
 5. Ligeon, C., C. Jolly, N. Bencheva, S. Delikostadinov, and **N. Puppala**. 2013. Production Efficiency and Risks in Limited Resource Farming: The Case of Bulgarian Peanut Industry. *Journal of Development and Agricultural Economics*. *Journal of Development and Agricultural Economics*. 5(4) 150-160.
<http://www.academicjournals.org/JDAE/PDF/pdf2013/Apr/Ligeon%20et%20al.pdf>.
 6. **Puppala, N.**, and S.P. Tallury. 2014. Registration of High Oleic Valencia Peanut Cultivar 'NuMex 01'. *Journal of Plant Registrations* 8:127-130.
 7. Burow, M.D., M.R. Baring, **N. Puppala**, C.E. Simpson, J.L. Ayers, J. Cason, A.M. Schubert, A. Muitia, and Y. López. 2014. Registration of Schubert Peanut Cultivar. *Journal of Plant Registrations* 8:122-126.
 8. Rajan, N., **N. Puppala**, S. Maas, P. Payton, and Russell Nuti. 2014. Aerial Remote Sensing of Peanut Ground Cover. *Agronomy Journal* 106:1358-1364.
 9. Nalugo, R.G., J.M. Ssebuliba, D.K. Okello, and **N. Puppala**. 2014. Recovery of Morphological Traits Associated with the Valencia Botanical Group in Segregating Groundnut (*Arachis hypogaea*) Generations in Uganda. *African Journal of Applied Agricultural Sciences and Technologies*. 1:57-68.
 10. Ssebuliba, R.G. Nalugo, D.K. Okello, and **N. Puppala**. 2014. Evaluation of the Reaction of Segregating Generations of Improved Groundnuts (*Arachis hypogaea*) to rosette disease in Uganda. *African Journal of Applied Agricultural Sciences and Technologies*. 1:52-56.
 11. Dwivedi, S., K. Sharawat, **N. Puppala**, and R. Ortiz. 2014. Plant Prebiotics and Human Health: Biotechnology to Breed Prebiotic-Rich Nutritious Food Crops.

12. Wambi, W., P. Tukamuhabwa, **N. Puppala**, D.K. Okello, R.G. Nalugo and N. A. Kaaya. 2014. Narrow Sense Heritability and Gene Effects for Late Leaf Spot Resistance in Valencia Groundnuts. *African Crop Science Journal* 22:327–336.
13. Kandala, C.V.K., K.N. Govindarajan, **N. Puppala**, V. Settaluri, and R.S. Reddy. 2014. Identification of Wheat Varieties with a Parallel-Plate Capacitance Sensor Using Fisher’s Linear Discriminant Analysis. *Journal of Sensor*. 55:1-5
<http://dx.doi.org/10.1155/2014/691898>.
14. Singkham, S., S. Jogloy, P. Kesmala, P. Swatsitang, P. Jaisil, **N. Puppala** and A. Patanathai. 2014. Oleic Acid Determined by Gas Liquid Chromatography and Near infrared Reflectance Spectroscopy in Segregating Populations of Peanut. *SABRAO Journal of Breeding and Genetics* 46 (2) 305-312.
15. Ratan, C., G.B. Burow, A. Farmer, J. Mudge, C. Simpson, T.A. Wilkins, M.R. Baring, **N. Puppala**, K.D. Chamberlin, and M.D. Burow. 2015. Next-Generation Transcriptome Sequencing, SNP Discovery, and SNP Validation in Four Market Classes of Peanut, *Arachis hypogaea* L. *Molecular Genetics and Genomics* 290:1169-1180. DOI 10.1007/s00438-014-0976-4.
16. Mahakosee, S., S. Jogloy, N. Vorasoot, B. Suriharan, **N. Puppala**, and A. Patantoi. 2015. Genotypic Diversity of Traits Related to Nitrogen Fixation in Valencia Peanut Germplasm. *SABRAO Journal of Breeding and Genetics* 45:311-322.
17. Wambi, W., P. Tukamuhabwa, N. Puppala, S.V. Tirumalaraju, D. K. Okello, C.M. Deom and Boris Bravo-Ureta. 2015. Genetic Variability Studies of Valencia Groundnut Varieties for Late Leaf Spot (*Phaeosariopsis personata*) Resistance. *African Journal of Plant Science*. 46(2) 305-312.
18. Kandala, C., R. Holsner, J. Sundaram, and **N. Puppala**. 2015. Nondestructive Determination of Moisture Content in Dry Fruits by Impedance and Phase Angle Measurements. *Journal of Sensor Technology* (5): 73-80.
19. Okello, D., M. Deom, **N. Puppala**, E. Monyo, and Boris Bravo-Ureta. 2016. Registration of Serenut 5R. *Journal of Plant Registrations*. 10:115-118.
20. Lujan, P., Sanogo, **N. Puppala**, and J. Randall. 2016. Factors Affecting Mycelium Pigmentation and Pathogenicity of *Sclerotinia sclerotiorum* on Valencia Peanut. *Canadian Journal of Plant Pathology* 96:461-473.
21. Cresencia, A., B.E.Bravo-Ureta, C.M. Deom, N. Kidula, D.K. Okello, N. Okoko and **N. Puppala**. 2016. Productivity Gaps Among Groundnut Farmers in Kenya

- and Uganda: A Stochastic Production Frontier Analysis. African Journal of Agricultural and Resource Economics 11:85-100.
22. Dwivedi, S.L., **N. Puppala** and R. Ortiz. 2016. Microbiome, Prebiotics, and Human Health. Reference Module in Food Science. Elsevier 1-9. <http://dx.doi.org/10.1016/B978-0-08-100596-5.03154-1>.
 23. Nalugo, R.G., W. Wilber, J.M. Ssebuliba, D.K. Okello, and **N. Puppala**. 2016. Heritability for Resistance to Rosette Disease in Exotic Valencia Groundnuts. African Crop Science Journal. 24:203-211.
 24. Swati Chaudhury, Kanwar L. Sahrawat, K. Srinivasu, Suhas P. Wani and **Naveen Puppala**. 2016. Comparative Evaluation of Protein Contents in Groundnut Samples by Near Infrared –Reflectance Spectroscopy and Skalar Colorimetric methods. Current Science. 123(68):18-209.
 25. Kandala, C., R. Holsner, V. Settaluri, and **N. Puppala**. 2016. Capacitance Sensing of Moisture Content in Bio-Fuel Materials: A Rapid and Nondestructive Method for Wood Chips. IEEE Sensors Journal 16(11):1-1
 26. Inupakutika, M., A.R. Devireddy, D. Willmon, **N. Puppala** and Y.Cho. 2016. Genome-wide Comparative Analysis of Genes Encoding Core Components of ABA Signaling Pathway in Legume Family. International Journal of Computational Bioinformatics and In Silico Modeling Vol. 5, No. 4 (2016): 828-843.
 27. Devireddy, A.R., Inupakutika, M, D. Willmon, P. Kakarla, **N. Puppala** and Y.Cho. 2016. Veterinary Antibiotics Influence Trigonelline Biosynthesis and Plant Growth in *Arachis hypogaea* L. Acta Agriculturae Scandinavica, Section B - Soil & Plant Science · November 2016. <http://dx.doi.org/10.1080/09064710.2016.1250941>
 28. Aninbon, C., S. Jogloy, N. Vorasoot, S. Nuchadomrong, C. Holbrook, C. Kvien, **N.Puppala** and A. Patanothai. 2017. Variability of arginine content and yield components in Valencia peanut germplasm. Breeding Science: May 2017.
 29. Willmon, D., A.R. Devireddy, M. Inupakutika, **N. Puppala** and C.Young. 2017. [Stress Responses of Peanut \(*Arachis hypogaea* L.\) Genotypes as Measured by Trigonelline Content after Exposure to UV-B Radiation](#). American Journal of Plant Science. 8:5 998-1010.
 30. Konijeti, R.K., P. K. Sarma, **N. Puppala**, K.V. Sharma and L.S.V. Prasad. 2017. A generalized correlation for the estimation of moisture removal in fruits and grains during hot air drying. International Journal of Heat and Technology. 35:2 426-432.

31. Achola, E., P. Tukamuhabwa, J. Adriko, R. Edema, S.E. Mwale, P. Gibson, **P. Naveen**, V. Okul, D. Michael and D.K. Okello. 2017. Composition and Variation of Fatty Acids among Groundnut Cultivars in Uganda. African Crop Science Journal. Vol. 25, No. 3, pp. 291 – 299.
32. Okello, D., M. Deom, **N. Puppala**, E. Monyo, and Boris Bravo-Ureta. 2017. Registration of Serenut 6T. Journal of Plant Registrations. November 16, 2017 online
<https://dl.sciencesocieties.org/publications/jpr/abstracts/0/0/jpr2017.03.0016crc?access=0&view=article>
33. Carvalho, M.J., N. Vorasoot, N. Puppala, A. M. Muitia and S. Jogloy. 2017. Effects of Terminal Drought on Growth, Yield and Yield components in Valencia Peanut Genotypes. SABRO Journal 49(3)270-279.
34. Manjonda, R.V., N. Vorasoot, N. Puppala, A. M. Muitia and S. Jogloy. 2018. Reproductive Efficiency and Yield Responses of Valencia Peanut Genotypes Under Terminal Drought Conditions. Khon Kaen Ag. J. 46(1)181-192.
35. Chamberlin, K. D., and N. Puppala. 2018. Genotyping of the Valencia Peanut Core Collection with a Molecular Marker Associated with *Sclerotinia blight* Resistance. Peanut Science (in print)

Varieties Released

1. NuMex-01 – Valencia cultivar released in USA (2014)
2. Schubert – Spanish cultivar released in USA (2014)
3. Serenut 5R – Spanish cultivar released in Uganda (2016)
4. Serenut 6T – Spanish cultivar released in Uganda (2017)
5. TamVal-OL14 – Valencia cultivar released in USA (2018)

Grants 2013 to 2017 (\$ 543,461)

1. Rowland, D., P. Payton, J. Mahan, K.R. Kottapalli and **N. Puppala**. A Systems Approach to Improving Abiotic Stress Tolerance in Peanut. USDA-AFRI through University of Florida. \$ 80,000. (September 1, 2013 - August 31, 2017).
2. **Puppala, N.** Valencia Peanut Breeding for Drought Tolerance – Year 4. National Peanut Board. \$ 16,575. (January 1, 2016 – December 31, 2016).
3. **Puppala, N.** Valencia Peanut Breeding for Drought Tolerance-Year 5. National Peanut Board. \$ 6,870. (January 1, 2017 - December 31, 2017).

4. **Puppala, N.** Transcriptome Analysis of Drought Induced Stress in Valencia Peanut. New Mexico Peanut Research Board. \$ 30,000. (January 15, 2016 - December 31, 2017).
5. **Puppala, N.** and A. Muitia. Intensifying Peanut Production in Mozambique. USAID – Peanut and Mycotoxin Innovation Laboratory through University of Georgia. \$ 315,129 (October 1, 2014- September 30, 2017).
6. Burow, M.D., C. Simpson, M. Baring, **N. Puppala**, S.Tallury, P. Payton and J. Mahan. An Integrated, Inter-Regional Approach to Breeding Valencia Market Class of Peanut for Enhanced Productivity and Sustainability under Water Deficit. USDA-AFRI – CARE PROGRAM- through Texas A&M University. \$ 55,713 (March 15, 2017- March 14, 2020).
7. **Puppala, N.** Valencia Peanut Breeding for Drought Tolerance – Year 1. National Peanut Board. \$ 15,826. (January 1, 2013 – December 31, 2013).
8. **Puppala, N.** Valencia Peanut Breeding for Drought Tolerance – Year 2. National Peanut Board. \$ 11,734. (January 1, 2014 – December 31, 2014).
9. **Puppala, N.** Valencia Peanut Breeding for Drought Tolerance – Year 3. National Peanut Board. \$ 8,214. (January 1, 2015 – December 31, 2015).
10. Sanogo, S., and **N. Puppala**. Effect of Seed Treatment on Germination, Vigor and Soil borne Diseases of Peanut. \$ 3,310. Arysta Life Science (June 1, 2015 – Dec 31,, 2016).

Graduate Students (advised/co-advised)

1. Srijana Dura – MS in Plant and Environmental Sciences 2017 (NIFA funded)
2. Abishek Xavier – MS in Plant and Environmental Sciences 2016 (NIFA funded)
3. Gurleen Kaur – MS in Plant and Environmental Sciences 2016 (NIFA funded)
4. David Wilmon – MS in Biology 2016 (National Peanut Board funded)
5. Julius Kwesiga – MS in Crop Science 2015 (Peanut Innovation Lab funded)
6. Rachael Nalugo – MS in Crop Science 2015 (Peanut Innovation Lab funded)
7. Supatra Mahakosee – MS in Agronomy 2015 (Peanut Innovation Lab funded)
8. Phillip Lujan – MS in Plant Pathology 2014 (National Peanut Board funded)
9. Wambi Wilbert – MS in Crop Science 2014 (Peanut Innovation Lab funded)
10. Mulindwa Joseph MS in Crop Science 2014 (Peanut Innovation Lab funded)
11. Amit Devireddy – MS in Biology 2013 (National Peanut Board funded)
12. Wooten Htoonni – MS in Agronomy 2013 (Peanut Innovation Lab funded)
13. Nattawut Singkham – Ph.D. in Agronomy 2012 (Peanut Innovation Lab funded)

14. Brandon Smyth – MS in Plant Pathology 2011 (National Peanut Board funded)
15. Binod Pandey – MS in Biology 2011 (National Peanut Board funded)