

Response to the MRC Committee review

This project certainly has high merit and is well written. The progress is real and making an impact. However, it is written as a 3-state, 4 investigator project. I think some effort should be made to either: 1. include multiple disciplines in the project, or 2. include a plan to meet with other peanut breeders to collaborate and share results, or 3. include a plan to use molecular techniques to aid in achieving the objectives.

1. Following the Review's Committee recommendation, our team now has six participants of multiple disciplines. The original members were also quite diverse relative to their expertise.

Dr. Balota, the PI of the S-1059, is an Associate Professor at the Virginia Tech's Plant Pathology, Physiology, and Weed Science Department with PhD in **Crop Physiology** and drought tolerance of crops: <https://www.arec.vaes.vt.edu/arec/tidewater/people/balota-bio.html>. Dr. Balota has over 200 publication in refereed papers and presentations at professional meetings on plant responses to abiotic stresses and crop physiology in addition to the annual Peanut Variety and Quality Evaluation reports.

Dr. Jeff Dunne is an Assistant Professor at the North Carolina State University and **Peanut Breeder**. Dr. Dunne has recently replaced Dr. Tom Isleib, the former peanut breeder on this project that recently retired. Dr. Dunne is the only peanut breeder in the country with 100% of his activity aimed at the development of Virginia-type cultivars, i.e., the other breeders breed almost exclusively runner peanut type. Virginia-market type is the primary peanut type grown on over 90% of peanut acreage in the Virginia-Carolina (VC) region. He is also the reference breeder for this proposal.

Dr. Daniel Anco is an Assistant Professor at Clemson University. Dr. Anco has a PhD in **Plant Pathology** from the Ohio State University. He is also the State's Peanut Specialist. At his location, Dr. Anco runs the PVQE trials twice: once uniformly with the other test locations and secondly with reduced fungicide applications so he collects information on the disease resistance of the breeding lines.

Dr. David Haak is an Assistant Professor of **Plant Genomics** at the Virginia Tech's Plant Pathology, Physiology, and Weed Science Department. Dr. Haak's research focusses on the integration of disciplines related to biological and biochemical variation of secondary plant compounds. Indeed, Dr. Haak' inclusion in this project has envisioned plans to use molecular techniques in future competitive proposals to NIFA originated or related to this proposal.

Dr. Sean O'Keefe is Professor of **Food Science and Human Nutrition** in the Department of Food Science and Technology at Virginia Tech. In this proposal, Dr. O'Keefe will follow with the flavor part of the research.

Dr. Barry Tillman is Professor and **Peanut Breeder** at the University of Florida. Even though Dr. Tillman' primary breeding is for runner type, a small portion of his germplasm includes Virginia-type lines and very few of them are tested in the PVQE testing for comparisons with the lines and cultivars developed in the VC region.

2. Other breeders do not breed Virginia-type peanut that is the focus of this proposal, and also the primary peanut type for the VC region including Virginia, North Carolina, and South Carolina. However, the PVQE results are annually published in two volumes, one for the agronomic and grading results, and one on quality including blanchability, oil profile and in the future flavor. These reports are available online at <https://pubs.ext.vt.edu/author/b/balota-maria.resource.html> and available to all breeders, growers, shellers, processors, and seed producers in the country and overseas. As a matter of fact Dr. Balota has submitted a USAID proposal within the Feed the Future Peanut Lab with one objective using the PVQE and S-1059 as a model for variety development in Senegal, Ghana, and Uganda. Results from the PVQE testing are shared at the professional societies meetings each year.
3. Using molecular techniques at this time is not affordable by the project. The funds from the cooperators just cover the operational costs of the project as described in the proposal.