

Evaluation of Organic Spanish Peanut (*Arachis hypogaea* L.) Breeding Lines for Production, an Update

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Estimates show that 98% of organic peanut production in the U.S is produced in West Texas. Organic producers receive premiums for their product but are limited in the use of suitable fungicides, herbicides, and seed treatments to control numerous production issues. Throughout the season, organic producers can see poor germination, stand establishment, weed and disease control without the application of common chemicals. The Texas A&M AgriLife Research Peanut Breeding Program initiated an evaluation of current germplasm in 2020 and 2021 with an on-farm trial in Terry and Gains Co. Texas in certified organic fields. Twenty lines were evaluated, consisting of 16 breeding lines and 4 commercially available checks. Entries were planted without the commercially available seed treatment in 2 row 3 m plots replicated 3 times. Plots were planted in a randomized complete block design with stand counts taken by hand at 7, 14, 21 and 28 days after planting. Plots were managed in accordance with common production practices for organically certified land. Additional plot data was collected and evaluated for visual greenness, pod rot, yield, and grade. Visual differences were examined based on date of stand counts in 2020 and 2021. Statistical differences were found in Yield, %TSMK and in both years. Furthermore, the 2020 location had heavy pod rot infestation and 2 entries showed statistically significantly reduced %DK. Finally, pod samples for these were also analyzed using Image-J software to estimate % pod rot infection where no significant differences were found. Data for the trial will be presented.