Evaluation of High-yielding Runner-type Peanut Varieties and the Effects of a Plant Growth Regulator (PGR) on a new Peanut Variety in Southwest Georgia

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Introduction

With the state of Georgia quickly approaching 1,000,000 planted acres of peanuts annually, growers often inquire about varietal performance of runner-type peanuts. With so many high-yielding varieties on the market, the appropriate selection of peanut varieties can be the difference between a grower breaking even, losing money, or amassing a profit in the realm of peanut production. Local data regarding varietal performance is of paramount importance to growers, so they can make informed decisions on which varieties to plant on their own farms. Additionally, with many varieties to choose from, information on varietal characteristics are important as well. In particular, management of excessive vine growth is one aspect of peanut production that growers ask questions about each year. Plant Growth Regulators (PGRs) containing the active ingredient prohexadione calcium are marketed to reduce canopy growth and improve row definition to assist with harvest. In one trial, 10 high-yielding runner-type peanut varieties (Georgia 24NHO, Georgia 22-MPR, TifNV-HG, Georgia 06-G, Georgia 21-GR, Georgia 23-RKN, FloRun 52N, Arnie, IPG-913, and Georgia 14N) were evaluated for yield. In a second trial, the effects of the PGR product Kudos® on the yield of a new runner-type variety (Georgia 24NHO) was evaluated.

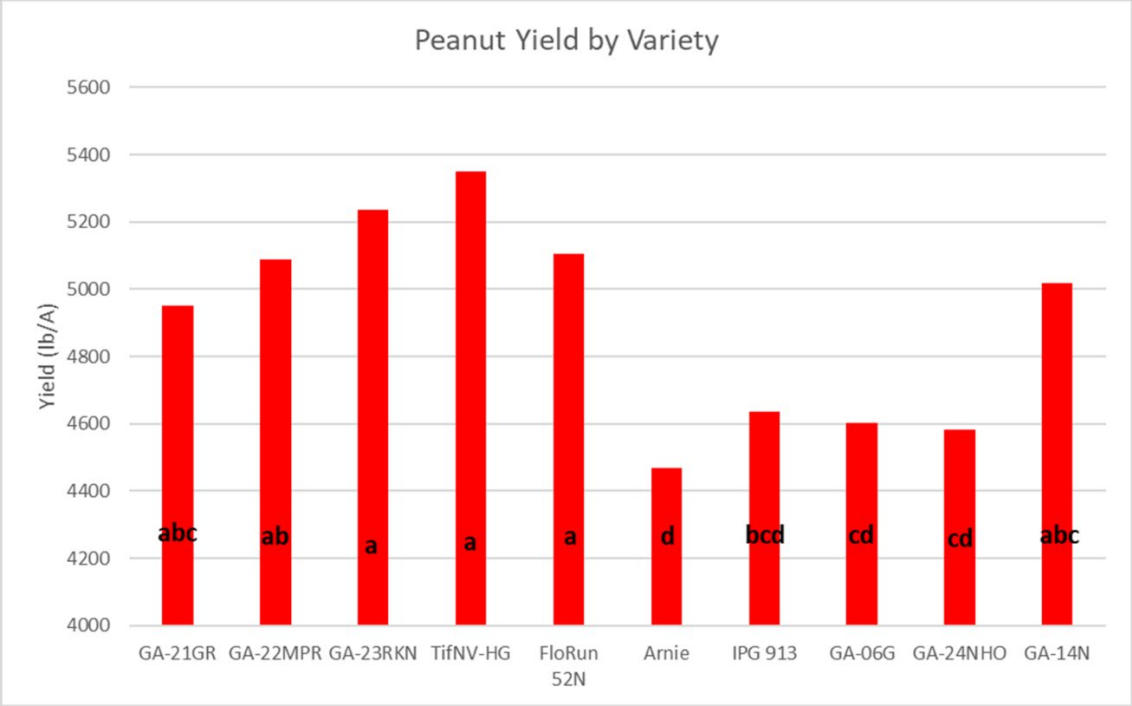
Materials and Methods

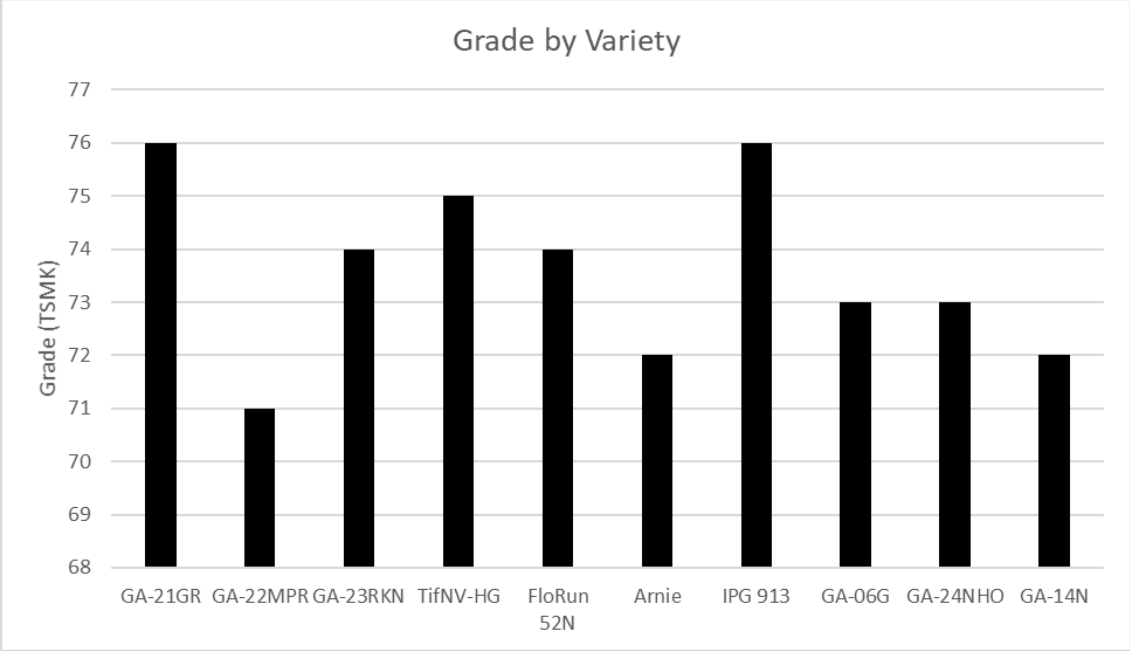
6-row plots of 10 high-yielding runner-type varieties (Georgia 24NHO, Georgia 22-MPR, TifNV-HG, Georgia 06-G, Georgia 21-GR, Georgia 23-RKN, FloRun 52N, Arnie, IPG-913, and Georgia 14N) were planted in a single row pattern into 3 replicates with an area of approximately 1 acre each on May 15th, 2025. Measurements of plant stand counts, % Tomato spotted wilt virus (TSWV) infection, and visual observations were taken throughout the growing season. The peanuts were inverted on October 10th, 2025 (148 DAP) and harvested on October 14th, 2025 (152 DAP). In the PGR trial, Georgia 24NHO peanuts were planted on May 23rd, 2025 as 6-row plots into 4 replicates each of treated (with Kudos®) and untreated, with each treatment area measuring approximately 0.3 acres. In compliance with the Kudos® label, it was applied at 5.4 oz with 1 pt of ammonium sulfate (AMS) and 1 qt of crop oil concentrate (COC) on July 28th, 2025 (66 DAP). The trial was inverted on October 24th, 2025 (154 DAP) and harvested on November 6th, 2025 (167 DAP).

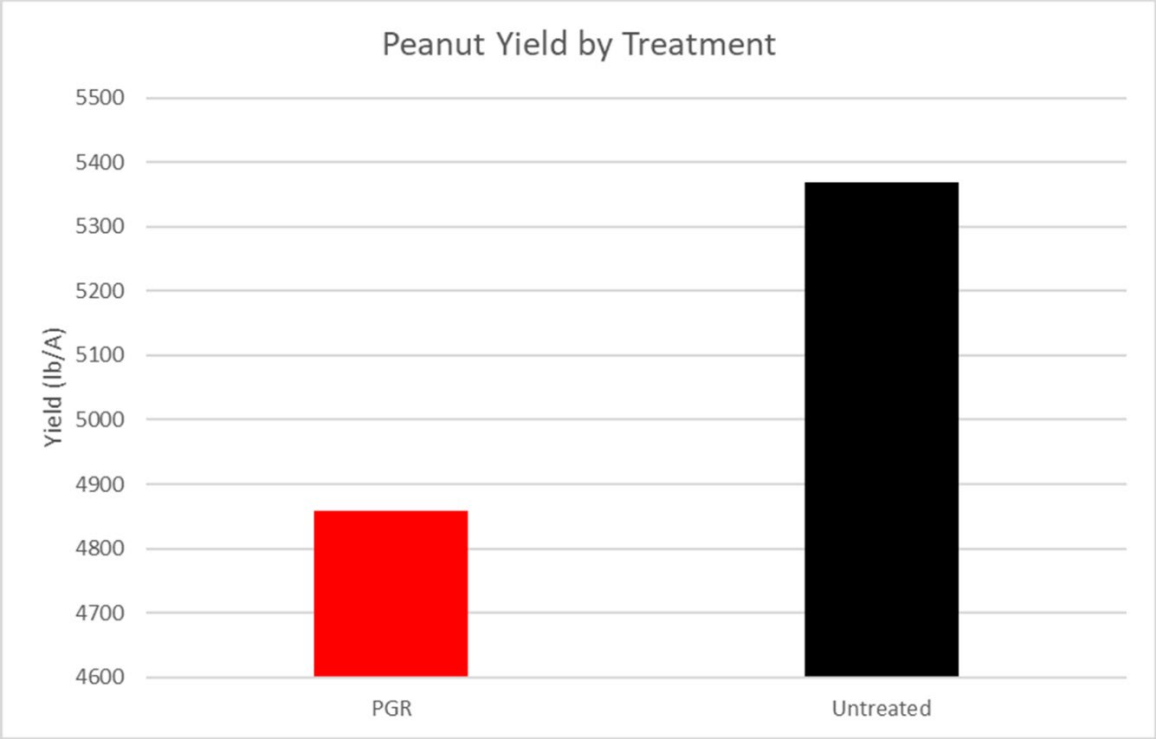
Results

In terms of yield, TifNV-HG yielded the highest at 5351 lbs/acre, although it was not statistically greater than the yields of 5 other varieties (21-GR, 22-MPR, 23-RKN, FloRun 52N, and 14N). Other 4469 lbs/A (Arnie) to 4635 lbs/A (IPG-913). Measurements on TSWV, white mold, and leaf spot were recorded and are being used to update Peanut Rx for the 2026 growing season. Grades (TSMK) ranged from 71 to 76 with an average grade of 73.6. In regards to the PGR trial, it seems as though the 24NHO variety is

very sensitive to growth regulator applications, as the PGR-treated peanuts yielded 510 lbs/A lower (4859 lbs/A) than the untreated (5369 lbs/A), although the PGR-treated peanuts did grade slightly higher (69) than the untreated (68). It is important to note that the PGR-treated peanuts also only received one application of the PGR whereas it is not uncommon for two in-season applications to be made to varieties that exhibit excessive vine growth.







Conclusions and Acknowledgements

This data provides growers with local yield data that enables them to make informed planting decisions for 2026. Out of 10 high-yielding varieties, 5 of them were statistically no different from each other in terms of yield. This gives growers in the Marion/Webster/Sumter/Terrell County area a good starting point for varietal selection, particularly if some varieties are more or less available than others. Additionally, the data also suggests that applications of the PGR product Kudos® is not necessary on the 24NHO variety as a yield loss was recorded. This information will be helpful for growers as we gain more experience with this new variety. The authors would like to thank Jason Blankenship, Justin Tanner from Georgia Seed Development, Scott Rogers, and the staff of the Southwest Georgia Research and Education Center for their collaboration on this project. The authors would also like to thank the Georgia Peanut Commission for its funding on this project.