



# Evaluating Performance of Vidalia Onion Varieties for Suitability in Organic Production

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## Summary

UGA Extension established the first on-farm organic Vidalia onion variety trial to address the lack of research-based recommendations for organic production. Seven varieties were evaluated under USDA-certified organic conditions, revealing significant yield and profitability differences among entries. Top-performing varieties improved potential returns by up to \$3,820 per acre, helping lay the groundwork for profitable and sustainable organic onion production in Georgia.

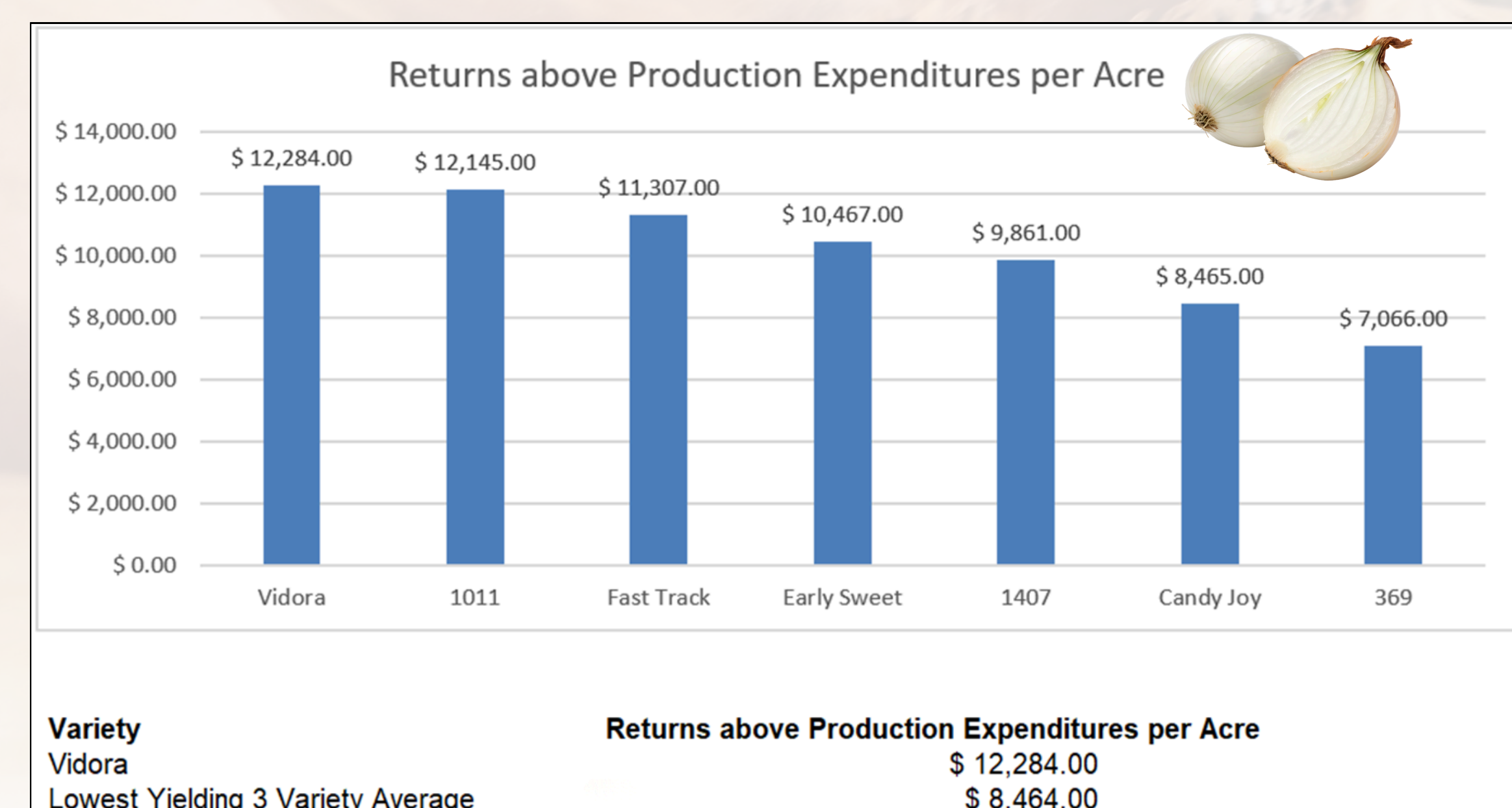
## Situation

UGA currently has limited recommendations for onion varieties suitable for organic production. Conducting variety trials at the research center is challenging because numerous conventional studies occur simultaneously, and disease or insect pressure may be influenced by nearby plots, making results less reliable for organic conditions. To address this gap, the UGA Extension Agent from Candler and Evans Counties partnered with a local certified organic grower who provided on-farm trial space. Since no research-based variety data exists for organic Vidalia onion production, seven varieties were selected for evaluation based on grower feedback to determine potential differences in yield performance and disease resistance under organic management. The total number of organic onion acres in the Vidalia Onion Growing Region is approximately 200 acres, valued at an estimated \$3 million.



## Response

UGA Extension ANR Agent established an on-farm organic onion variety trial in Evans County in collaboration with a local certified organic grower. Seven varieties were placed into the 2024–2025 Organic Vidalia Onion Variety Trial. This trial was conducted on a USDA organic-certified onion field in Evans County, Georgia. Varieties were selected by Extension staff based on feedback from growers surveyed about the varieties they were using in organic production. Each variety was evaluated in a plot measuring 6 feet wide by 20 feet long, containing approximately 240 plants. Varieties were replicated four times and harvested based on maturity stage as determined by the trial coordinators. The final stand density was equivalent to 87,120 plants per acre. Upon harvest and grading, yield measurements were collected, and a representative sample of onions from each plot was sent to the UGA Crop Quality Laboratory in Athens, Georgia, for quality and/or flavor analysis.



## Impact

The 2024–2025 Organic Vidalia Onion Variety Trial provided the first side-by-side evaluation of organic onion varieties in the Vidalia region. The marketable yields varied significantly across entries, with the top-yielding variety producing 914 boxes per acre, while the lowest-yielding variety produced 660 boxes per acre. The top-yielding entry also produced the highest proportion of jumbo-sized bulbs, 653 boxes per acre, which accounted for 71 % of the marketable yield, whereas the lowest-yielding entry produced mostly medium bulbs, 467 boxes per acre, which accounted for 74% of the marketable yield. Cull rates remained low across all varieties, with less than 10 percent of the bulbs removed, suggesting good stand quality under organic management. Economic analysis demonstrated that selecting a top-performing variety could substantially increase profitability. The top-yielding entry returned \$12,284 per acre above production costs, compared to \$8,464 for the lowest-yielding three-variety average, representing a \$3,820 increase in net returns per acre. With an estimated 200 acres of organic onions potentially impacted, the total economic benefit equals \$764,000. Preliminary trial results were shared with growers during the Vidalia Onion Production Update on September 10, 2025. A full report, including an economic analysis, will be posted to the Vidalia Onion Blog. By identifying varieties with stronger yield and economic potential, this project increases profitability for organic growers, supports the long-term sustainability of organic Vidalia onion production in Georgia, and will help build a foundation for organic onion production in the years to come.

