Over the past 4 or 5 years, the peanut cultivar Georgia O2-C has become one of Southeast Georgia’s most consistent yielding peanut cultivars. During this time, county agents and farmers from the area observed that this cultivar tends to hold on to peanuts even after perceived maturation, and to add yield and grade after significant cold stress. To test this hypothesis, a study was designed to quantify peanut maturity, yield, and grade over an extended harvest period through the onset of cold stress.

On May 13 2009, Georgia 02-C peanut was planted at the Southeast Georgia Research and Education Center in Midville, Georgia. Harvest dates were arranged in a randomized block design with 4 replications. A hull scrape maturity test was conducted on Sept. 10th at 120 days after planting (DAP) to project the first digging date which was September 30th at 140 DAP. Hull scrape maturity tests (4 reps) were conducted weekly through November, and pod-stem breakdown and pod losses were observed. Seven harvests for yield and grade were conducted from Sept. 30th until Nov. 21st. Weekly harvests were planned, but impossible due to heavy rain.

In the 2009 trial, the highest yield (5328 lbs/a) was observed on October 27th at 167 DAP. This was 8 days later than the first near-freezing cold spell (35° F), although 13 of the prior 20 days since Sept. 29th had nighttime temperatures less than 60° F. Peanut grade as indicated by total sound mature kernels reached a maximum of 77% on Oct. 21st, approximately 1 week before maximum yield and remained level throughout the other digging dates.

Detailed data from hull scrape maturity profiles showing pod movement through and into maturity groups was recorded. Maximum yield corresponded with 37%, 68%, and 76% when harvestable pods were grouped as black; brown plus black; and orange plus brown plus black, respectively. Pod stems remained strong and little pod-stem breakdown was evident through the date of maximum yield, even though black pods were observed in hull scrape profiles for the preceding 5 weeks. This data suggests that pod stems for Georgia O2-C may have more resistance to maturity breakdown compared to previous observation in other varieties, and may be partially responsible for the longer time between planting and harvesting and the greater flexibility in timeliness of digging.