Release of OLe Spanish Peanut.

K.D. CHAMBERLIN*, R.S. BENNETT, H.A. MELOUK, USDA-ARS, Wheat, Peanut and Other Field Crops Research Unit, Stillwater, OK 74075-2714; J. P. DAMICONE, Department of Entomology and Plant Pathology, and C. B. GODSEY, Department of Plant and Soil Sciences, Oklahoma State University, Stillwater, OK 74078-1056.

OLé is a high oleic Spanish-type peanut that has excellent yield and enhanced Sclerotinia blight and pod rot resistance when compared to other high oleic Spanish cultivars. The purpose for releasing OLé is to provide peanut producers with a true Spanish peanut that is high oleic and has enhanced yield, grade and disease resistance compared to other high oleic Spanish varieties. OLé (tested as ARSOK-S140-1OL) is the product of a Tamspan 90 X F435 (original donor of the high O/L gene). F₁ seed were grown out in 2001 and F₂ generation seed were space planted in 2002 in plots at the OAES Experiment station at Ft. Cobb, OK. Single plant selections were made from F₃ plots to become individual F₄ breeding lines. F₄-₅ breeding lines were evaluated for disease resistance and agronomic performance in 2006-2007. OLé was identified in 2007 as exceptional due to its low incidence of Sclerotinia blight and high yield. Early bulk seed selection of OLé was made from healthy and Sclerotinia-free plants grown at Ft. Cobb, OK, in 2007. Seed increase of the selection as well as testing of agronomic performance was performed in 2008-2013 at several Oklahoma locations. Seed increases were also conducted at the Puerto Rico Winter Nursery. OLé was identified as exceptional due to its potential for low incidence of Sclerotinia blight and pod rot and excellent yield compared to available high oleic Spanish cultivars. In agronomic performance tests conducted from 2007-2013 in Oklahoma, OLé averaged 48% less incidence of Sclerotinia blight and 75% less pod rot than other Spanish cultivars tested. OLé averages a yield of 500 – 1000 lbs more per acre and a crop value of $83 – $175 more per acre than other Spanish cultivars. OLé is high oleic (O/L = 20:1) and has a nutritional and flavor profile similar to that of other Spanish cultivars. OLé is a true Spanish peanut cultivar with an erect growth habit. OLé seed typically matures at 120 days after planting under Oklahoma growing conditions. Seed size of OLé is typical of Spanish cultivars with seed weight/100 averaging 47.6 g. OLé seed typically grade similar to other Spanish cultivars but have averaged 1-3 points higher depending upon location and year. The release of OLé peanut will offer producers in the US Southern Plains a true Spanish peanut with an exceptional disease resistance and yield package. The production of OLé will increase their profit margin by an average of $130 per acre, potentially increasing the economy by $7 M annually.