

Advancement of Peanut Germplasm and Cultivars in Texas

Summary

This past year there were 3 earlier generation yield trials and 6 advanced line yield trials located at the research farm. This germplasm will someday be the basis for commercial varieties grown in Texas.

Statement of Problem and Need

One of the most important decisions that a grower makes is the determination of which peanut variety to plant. This is in fact one of the few inputs that often does not cost any additional upfront money. However, this decision can impact his final economic situation if the wrong variety is chosen and results in loss due to yield, grade, or quality. Most peanut breeding programs are in the hands of public institutions at this time, and many of these programs are funded exclusively from outside sources such as commodity associations. Therefore, to continue to develop new cultivars of peanut it is essential that we provide the resources to support these programs. Currently, the peanut breeding program in West Texas does not have a state supported location to adequately evaluate new peanut germplasm. It is imperative that this program have a location suitable for peanut production that is under the control of the breeding program. Due to cost of developing germplasm and the relatively small amount of seed available during the initiation of cultivar development this type of research location is essential

Plan of Action

Recently, the Texas Peanut Producers Board developed an agreement with J Leek Associates to lease a small irrigated farm for the advancement of peanut germplasm. This location is currently used by all of the breeding programs in Texas. The research farm will continue to be used to evaluate new germplasm in Texas that will eventually lead to new cultivar release. New

Discussion

The advancement of peanut germplasm to release new cultivars is a major part of the Texas peanut breeding program. The plan is to develop germplasm and release new cultivars that will increase peanut profitability in Texas. Key components of this program are to increase yield and quality and hasten maturity which should all lead to increase peanut profitability in Texas. Currently peanut breeding projects are on going at the research farm located in Brownfield, TX. This is the primary location for the West Texas breeding program but is also utilized to evaluate germplasm from the other

peanut growing regions of Texas. It is essential that the Texas peanut breeding program have a location that is devoted entirely too peanut research. Therefore, the research farm was developed to achieve this goal. This past year there were 3 earlier generation yield trials consisting of 150 genotypes and 6 advanced line yield trials consisting of 180 genotypes located at the research farm. This past year three of the best were large multiple irrigation rate trials as well. This germplasm will someday be the basis for commercial varieties grown in Texas.