

Australian Peanut Breeding, 44 years of History. Where to Now?

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After a long history of domestic peanut production in Queensland, NSW and the Northern Territory, the first formal peanut breeding program began in the Department of Primary Industries at Kingaroy in 1977. Prior to this formal program, the Australia industry was based around two introduced varieties, Virginia Bunch and Red Spanish with a smaller area planted to an unofficial release of White Spanish. Crossing began in 1977 and study tours to ICRISAT and US breeding programs in the following two years establishing important links to international programs that remain fruitful to this day. The first release from the program was McCubbin, a red Spanish variety with significant yield improvement, in 1985. Significant events throughout the program's life included; the release of varieties nominated for irrigated production, the successful release of early season maturing varieties to reduce aflatoxin risk the dryland region, the introduction of high oleic oil composition and the development of Sutherland, a foliar disease tolerant variety that permeates throughout releases post-2017. Domestic peanut production has changed dramatically since the inception of the program, with the bulk of domestic peanuts now grown under irrigation, with a significant area as a sugarcane rotation crop. Consequently, peanut breeding has also undergone significant change to meet both grower, processor and consumer requirements. What lessons can we learn from both the successes and failures over the past 44 years and how can we use those lessons to guide future peanut breeding programs to underpin a prosperous and viable domestic peanut industry? The transfer of Grains Research & Development Corporation funding from peanut breeding to peanut agronomy and crop protection provides a catalyst to answer these questions and promote new ideas and technologies to continue the development of successful commercial peanut varieties.