The Uberlândia Federal University has implemented the Soybean Breeding and Genetic Studies Program (PMEGS) for 24 years, aiming to improve soy production technologies in tropical environments, developing new conventional, productive, stress-resistant cultivars biotic and abiotic, with high phenotypic adaptability and stability, resulting from the application of classical and molecular breeding methods.

The researches conducted in Uberlândia-MG (LS 18º 30'), involve hybridizations, early generations advances in vegetation houses and advanced generations in the field, segregant population assessment, progeny tests, adaptability and stability tests, resistance to pests, diseases and thermal and water stresses, selection of promising strains, registration and protection of the new cultivar, breeder's seed production and genetic seeds.

Coordinated by Prof. Dr. Osvaldo Toshiyuki Hamawaki, an extensive university network of soybean research was implemented during this period, involving the following University Institutions: the Federal University of Piauí; the Federal University of Mato Grosso, Campus Rondonópolis, Educational Foundation of Ituverava-SP and the Faculty Arnaldo Horacio Ferreira de Luís Eduardo Magalhães, in Bahia.

The researchers involved in PMEGS are part of the "Soybean Breeding" Research Group of CNPq, most of them being PhD students, including undergraduate students in Agronomy and Biotechnology, MSc and PhD students in Agronomy and Biotechnology and postdoctoral degrees in Agronomy. The final product was a germplasm with a broad genetic base, based on the combination of genotypes of different origins. So far, 15 soybean cultivars Registered in the RNC / MAPA and 06 Protected in the SNPC / MAPA, with innovative, differentiating and productive potential.

The technology under development is the process of obtaining new soybean varieties adapted to the regions of the cerrado, with higher grain and oil yield and partial or total resistance to soybean Asian rust, root-forming nematodes, root and cyst lesions, white mold, among others and to water deficits and high temperatures.

Seed production is allowing access to UFUS cultivars to grain growers located in the states of MG, GO, MT, BA, TO, MA, PI and RO after exhaustive tests on adaptability and stability in this immense region, presenting record productivity indexes, such as UFUS 8401 that reached 100 sacks / ha, and the new early cultivars: UFUS 6901, UFUS 6901RR and UFUS TUPI, all with a 100 day cycle in MG, as well as UFUS 7415, UFUS Mineira and UFUS 7401, with cycles ranging from 108 to 118 days.

Finally, the high resistance to the Pratylenchus brachyurus nematode presented by cultivars UFUS 6901, 7401 and 8401 and resistance to the nematode Meloidogyne incognita are cultivated by cultivars UFUS 7801 and UFUS 8301.