

Genetic diversity of the gene Resveratrol Synthase in *Arachis* spp. from Embrapa active germoplasm bank

Notes

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Resveratrol is a fitoalexin from the stilbene family synthesized only by a few plant species such as peanut and grapevine. The production of Resveratrol is triggered by biotic and abiotic stresses and is directly linked to resistance to pathogens. Besides its role in plant defense, Resveratrol has a significant value in human health due to its anti-oxidant properties. This fitoalexin is a product of the enzyme Resveratrol Synthase. In order to observe the diversity of the gene Resveratrol synthase in *Arachis*, eight different genotypes of *Arachis* were used in this study (two cultivated, five from wild species and one synthetic anfidiploid). Primers were designed for Stilbene Synthase genes of peanut from the Genbank. Amplicons were obtained for all genotypes. Sequence analyses revealed five distinct groups for this gene family. This diversity is randomly distributed within the genotypes studied, suggesting that the allelic diversity is prior to the speciation events within *Arachis*. Further analyses will take place to study the expression levels of Resveratrol Synthase gene under stress conditions. This effort intends to highlight alleles leading to Resveratrol accumulation to be used in breeding programs, making use of diversity of wild *Arachis* relatives as a source of genetic variation.

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