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RESUMOS
SUMMARIES

BIOTECHNOLOGY AND YIELD IMPROVEMENT IN AGRICULTURE AND FORESTRY

Legumes

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SUMMARY

In the last decades has happened a great increase in the understanding of the chemistry and biology of nucleic acids. Techniques that would appear as science fiction some years ago, are now available for the recognition, isolation, construction and introduction of new genes in organisms.

Many legume crops are of great economical and social importance, such as soybeans, common beans, peanuts, peas, lentils, alfalfa. Traditional plant breeding for those species has been successful to produce new cultivars with higher yield potential, disease resistance and other useful traits. Most of the economically important characters are quantitative and many are determined by many genes (multigenic). For those characters, there are some new developments of molecular techniques, such as the restriction fragments length polymorphism (RFLPs), that when well understood and *dominated* by plant breeders will improve their efficiency in great measure: RFLPs will allow for selection to be practiced on the DNA sequences directly instead of on phenotypes and this way the masking caused by environmental effects will be decreased to a minimum and selection efficiency, in consequence will be increased.

RFLPs libraries are being constructed for some legume crops in many different laboratories of the World, and plant breeders in many institutions are trying to obtain the needed expertise in those techniques to incorporate them in their program.