BREEDING DRY PEAS AND BRASSICAS IN CENTRAL BRAZIL

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Dry Peas and brassicas (mainly cabbage, cauliflower and broccoli) are important cash crops in central areas of Brazil.

Since 1976, a research project on dry peas has been carried out by CNPH/EMBRAPA with the objective of introducing and developing new pea cultivars. Powdery mildew (*Erysiphe pisi*), Sclerotinia rot (*Sclerotinia sclcrotiorum*), leaf spot (*Ascochyta spp.*) and seedling rot (*Rhizoctonia solani*) are the most important pea diseases.

Powdery mildew resistance was found in cv. Triofin and has been introduced in our breeding materials. Some lines with the **af** gene have been developed in an attempt to reduce harvesting losses. The unique plant architecture of these **af** genotypes appears to have great influence in sclerotia production by *S. sclerotiorum*, when compared with "normal" (**Af**) genotypes.

Semi-leafless cultivars recently released by EMBRAPA were characterized through isozyme electrophoresis by using esterase (EST) and leucine aminopeptidase (LAP) enzyme systems.

Due to this program, the area planted to dry peas in Brazil went from 15 ha, in 1980, to more than 20,000 ha in 1988.

Cabbage, among the brassicas, was introduced in Brazil by 1647 and nowadays our annual production is 263,647 tons.

Black rot (*X. campestris* pv. *campestris*), soft rot (*Erwinia carotovora* subsp. *carotovora*) and club root (*Plasmodiophora brassicae*) are important *Brassica* diseases. However, black rot is by far the most serious disease under rainy and humid conditions.

In 1986, EMBRAPA/UNESP-Botueatu released an open pollinated cultivar (cv. Uniao) with excellent resistance to black rot. Besides being used as source of breeding lines, by private and public companies, 'Uniao' is also cultivated by farmers.

Cytoplasmic male sterelity (R - cytoplasm) has been introduced in cabbage, broccoli and cauliflower for hybrid seed production.

Tissue culture techniques have been used as a tool for breeding heat tolerant cauliflower for the northeastern area of Brazil.