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IDENTIFICATION OF SOURCES OF RESISTANCE TO THE PRINCIPAL DISEASES OF SOUTHERN PEA (*Vigna unguiculata* (L.) Walp IN BRAZIL

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Southern pea or Cowpea in Brazil is concentrated in the northeast region where annual rainfall is low and irregular. Average annual production averaged over the past ten years is 500,000 metric tons and it constitutes the principal source of protein in the diet of the people, especially in rural areas where consumption is estimated at 30-40 kg/person/year

The National Cowpea Improvement Program was initiated in 1978 at the National Center of Research on Rice and Beans (CNPAP, Goiania, Brazil). A pathology program on a national level was established to identify sources of resistance to the principal diseases. The first preliminary survey indicated that the more important diseases are cowpea mosaic virus, sub group severe, (CSMV) occurring generally in all regions of production, aphid-borne mosaic viruses occurring in the northeast, smut (*Entyloma vignae*) in the States of Para, Piaui, Rio Grande do Norte, Pernambuco and Ceara, scab (possibly *Sphaceloma*) in Goiania, Pernambuco and Rio Grande do Norte, wilt (*Fusarium oxysporum*) and leaf spot (*Cercospora cruenta* e *C. canescens*) both occurring generally over the production areas.

Other diseases of lesser importance observed were: powdery mildew (*Erysiphe polygoni*), anthracnose (*Colletotrichum lindemuthianum*), pythium stem rot (*Pythium*), sclerotium stem rot (*S. rolfsii*), ashy stem blight (*Macrophomina phaseoli*), seedling mortality (*Thanatephorus cucumeris*), web blight (*Thanatephorus cucumeris*), sclerotium leaf spot (*S. rolfsii*), Ascochyta blight (*A. phaseolorum*), target leaf spot (*Corynespora cassiicola*), pod rot (*Choanephora spp*), bacterial blight (*Xanthomonas*), and root-knot nematode (*Meloidogyne incognita*).

In 1978, observations were made in a germplasm evaluation trial which included introductions and collections from farmers' fields. One hundred and thirty cultivars were selected for a Preliminary Disease Evaluation Trial. From this trial, 81 cultivars were included in a National Disease Reaction Trial to be conducted in 11 locations in the north and northeast of Brazil with the objective of identifying cultivars with multiple disease resistance. The cultivars of the National Disease Reaction Trial were tested in greenhouse for CSMV and two other viruses. Preliminary results in the field indicated the cultivars Figado de Galinha, Macaibo, Africano 2, Pitiuba-PI, 4R-0267-1E, (TVx-1999-01E), TVx 1843-1C, TVx 1836-015J, TVx 2773-07E e TVx 1999-1D TVu's 52-2, 157, 3901, 2480, 1583, 312, 381-1, 397 e 1509 to be more resistant to CSMV.