

Identification of multiple disease resistance in groundnut—P. SUBRAHMANYAM, D. McDONALD, S. N. NIGAM. AND R. W. GIBBONS, International Crops Research Institute for The Semi-Arid Tropics (ICRISAT), Patancheru P. O. Andhra Pradesh-502 324—Leaf-spots (*Cercospora arachidicola* and *Cercosporidium personatum*) and rust (*Puccinia arachidis*) are serious diseases of groundnut world-wide. A trial at ICRISAT in the 1978 rainy season indicated minimum yield losses of 68 per cent for pods and 48 per cent for haulms from combined attack of rust and leaf-spots. About 7,000 germplasm lines were screened for resistance to leaf-spots and rust at ICRISAT. Preliminary field screening was done under natural epidemics in the 1977 and 1978 rainy seasons. Cultivars rated between 2 and 5 on a 9-point disease scoring scale received further testing in the field using an infector row system, and in the greenhouse using artificial inoculation. Five cultivars had good resistance to rust and measurable resistance to one or other of the leaf-spots. Some have been used extensively in hybridization with a range of high yielding susceptible cultivars. From the segregating populations high yielding material has been selected with resistance to one or more of the diseases and these are being further tested.
