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Short Communication

Cassava anthracnose disease sources of resistance

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A total of 436 African landraces and 497 improved cassava genotypes were planted in 1996, 1997, 1998 and 1999 growing seasons.. These were evaluated for their reactions to cassava anthracnose disease (CAD) under natural infection conditions at Ibadan (a high infection zone). The severity of the disease was determined by counting the total number of canker/plants and measuring the diameter the cankers. Data were collected at 6, 9 and 12 months after planting. The four-year data were pooled and subjected to statistical analysis. Result showed that of the 436 improved germplasm evaluated, 10 were resistant, 64 moderately resistant, 328 were moderately susceptible, and 95 were highly susceptible. The results also showed that 45 of the landraces were resistant, 87 moderately resistant, 354 were moderately susceptible, whereas 60 were highly susceptible. Of the resistant landraces and the improved, TME 19, TME 53, TME113, TME 244, TME 475, and TME 523; I85/02015 and I8700028 were completely free of cankers. The resistant genotypes have been introgressed into broad-based breeding populations to diversify resistance to CAD in newly improved genotypes.

Key words: Anthracnose cassava resistance.

INTRODUCTION

In the early 1970's when extensive research began on cassava, it was observed that the crop was susceptible to at least thirty different diseases caused by fungal, bacterial, viral and mycoplasma pathogens (Theberge, 1985). Among these, the African Cassava Mosaic Virus (ACMV), Cassava Bacterial Blight (CBB), Cassava Anthracnose Disease (CAD) and root and tuber rots were the most important in Africa (Lozano and Booth, 1974; Ikotun, 1975; Smith, 1991). Of these diseases, CAD caused by *Colletotrichum gloeosporioides* Penz f.sp *manihotis* Chev is the most important fungal disease of cassava in the field (Hahn et al., 1989). The most outstanding effect of the disease is its ability to cause severe stem damage causing canker on stem, wilting of leaves and diebacks. Badly infected stems become brittle and break easily under strong winds.

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The overall effect of these is the reduction in yield and in the amount of healthy plantable stems available to the farmers that a search for resistant cultivars needed to be embarked upon. The frequency with which the disease is encountered in cassava has been a matter of concern to many workers. Muyolo (1984) and Makambila (1987) reported that between 80- 90% of local cultivars were rated as severely infected in Zaire and Congo. ively. Fokunang (1995) also observed that the causal organism of CAD was found on diseased cassava stems sampled from some states in the humid and sub-humid agro-ecological zones of Nigeria.

Chemical and cultural controls of cassava diseases usually encounter some problems. It has been observed that chemical control of plant diseases and rouging of all infected plants are not feasible since major diseases such as ACMV, CBB and CAD are already widely spread and their methods of dissemination complicated.

Breeding for resistance to cassava anthracnose disease appears to be the most efficient means of control