SUMMARY

The symptomology and morphology of *P. polysora* as occurring on *Zea mays* L. in Trinidad is described. An unrecorded teleutospore form is reported. The race of *P. polysora* on *Tripsacum laxum* Nash is shown to be morphologically identical with that on *Z. mays* but unable to infect *Z. mays*. An account is given of the artificial inoculation of *Z. mays* seedlings with *P. polysora* from which, a simple scoring system for assessing the rust susceptibility of seedlings has been evolved. The rust susceptibility of eight West Indian maize races has been assessed, based on seedling tests and field observations.

INTRODUCTION

*P. polysora* has not been subject to any intensive study in the West Indies, the rust being considered as only a minor pathogen of maize. Interest in the disease has been stimulated by the recent appearance of the rust in West Africa and the extreme damage to the maize crop that has resulted. The West Indian maize varieties now hold a position of potential importance as introductions to Africa and as breeding material. (Stanton & Cammack, 1953). Reports issued in West Africa (Blane, 1953. Nigerian Maize Rust Research Unit, 1952.), show that the behaviour of the fungus is markedly different from that in Trinidad and it is of interest to compare these reports with this paper.

*P. polysora* is recorded in Trinidad on *Z. mays*, *T. laxum* and *Euchlaena mexicana* Schrad. On maize, teleutospori are rare and prior to Cummings (1941) description the fungus was considered to be *Puccinia sorghii* Schw.