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ISOT

Symposium abstracts.
1992
RF-PP-1992.00459
CNPSO-13216-1

XXIII

INTERNATIONAL SEED TESTING CONGRESS SYMPOSIUM ABSTRACTS

BUENOS AIRES ARGENTINA
NOVEMBER 2 - 4 1992

The standard germination test displayed a decline in germination and shortened shoot, root, and seedling length after storage. The same applies to field trials where a decline was found in emergence and the rate of emergence. GADA reconfirmed these results.

It was noted that high moisture environment in combination with mild temperature as well as subtropical conditions had a significant detrimental effect on seed viability and performance.

A further interesting observation was that the locality in which the specific seedlot of a cultivar was produced had no influence on seed performance. The cultivars, however, revealed significant differences in deterioration.

Nr. 100

Identification of *Diaporthe phaseolorum* f.sp. Soybean Seeds by the Blotter Test

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Soybean stem canker, caused by *Diaporthe phaseolorum* f.sp. *meridionalis*, (anam. *Phomopsis phaseoli* f.sp. *meridionalis*) was first identified in Brazil in the 1988/89 crop season. Since then, the disease has spread to all the major soybean producing regions. The fungus is seed-borne, but the rate of seed infection is usually less than 1% and the distinction between its *Phomopsis* stage (Phm) and the *Phomopsis* that causes pod and stem blight or seed decay (Phs) has been difficult. In order to differentiate between Phm and Phs, seeds naturally infected by Phs and seeds artificially inoculated with Phm (pod inoculation by the toothpick method) were compared by the blotter test. After seven to ten days incubation at 25 + 2° C, both fungi showed morphological variabilities, but the following differences were apparent between them:

Phm: a) mycelia: dense and appressed, light to dark-brown with chlamidospore strands on the seedcoat and dark-brown on the blotter around the seed; b) picnidia: dark-brown to near black, borne singly, within or slightly erumpent to the seedcoat, frequently opening in long splits or cracks; c) cirrus or conidia: initially light-yellow and turn dark-yellow with age; d) conidia: only alpha-type, frequently with malformation ("atypic").

Phs: a) mycelia: more aerial and fluffy, white to light-brown, with frequent black to gray submycelial stroma; b) picnidia: variable in shape and size, with or without defined beak, usually clustered, black, mostly external to the seedcoat and the mycelial mat; c) cirrus: cream-white to light-yellow and expelled through narrow and well defined pores; d) conidial masses: composed of alpha and beta spores, with predominance of either type, depending on the colony.