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WILT OF *Vanilla planifolia* A

Vanilla (*Vanilla planifolia* A.) is a very important spice crop grown in the Horticultural Research Station, Ambalavayal, Kerala State. The vanilla plants in the Research Station as well as in the nearly Government and private plantations in Wynad were found to suffer from wilt and the plants succumbed to death prematurely.

The main symptom of the disease noticed was wilting of seedlings in the nursery and plants in the field. The wilting was characterized by gradual yellowing, withering and drying of the stem. Examination of the roots and of the base of the stem showed that tissues are blackened uniformly especially in early stages, in streaks. Diseased plants when pulled up easily detached at the base. When the stem portion of the infected plants were cut open typical vascular browning was observed.

Repeated isolations from such diseased plants yielded consistently a fungus which produced white aerial mycelium on potato dextrose agar. The mycelium was septate and hyaline. Smaller conidia, one celled, oval to reniform were numerous in the serial mycelium. The conidia were of the dimensions $5 \times 2.6 \mu$. Macroconidia were of the dimensions $35.40 \times 3.5 \mu$.

For testing the pathogenicity the fungus was grown on potato dextrose agar for 7 days and spore suspensions prepared in sterile water and added to the root zone of the healthy vanilla plants in the field and seedlings grown in polythene bags in the nursery. Spore suspensions were also added to the root zone of seedlings grown in sterilized soil. Control plants were also maintained. Typical symptoms of the disease developed in 12-15 days after inoculation and complete withering of the plants occurred in 25 days after inoculation. Control plants survived with out infection. On reisolation the same fungus was obtained. The pathogenicity was established by applying Koch's postulates.

The fungus has been identified as *Fusarium oxysporum* Schlecht. ex. Fr. f. sp. *vanillae* and the cultures of the pathogen have been deposited in Common Wealth Mycological Institute, Kew (ACC. No, IMI. 176671). Alconero and Santiago (1969) have reported the incidence of *Fusarium oxysporum* on *Vanilla* in Puerto Rico. Leakey (1970) isolated *Fusarium oxysporum* f. sp. *vanillae* from roots of vanilla and found pathogenic under experimental conditions.

This is the first record of *Fusarium oxysporum* Schlecht ex. Fr. f. sp. *Vanillae* on *Vanilla* in India.

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സംഗ്രഹം

അമ്പലവയൽ ഉദ്യാനകൃഷിഗവേഷണ കേന്ദ്രത്തിലും, സമീപത്തുള്ള സർക്കാർ കൃഷിത്തോട്ടത്തിലും, സ്വകാര്യ കൃഷിയിടങ്ങളിലും വാനിലചെടികൾക്ക് ഉണക്കം ബാധിച്ചതായി കണ്ടു. roic9-gn raj ffroroxrtoo വ്യാപിക്കുന്നതും, ക്രമേണ raroaj കുറുപ്പുനിരമായി ചെടികൾ gsm ബുദ്ധിമുട്ടാണ് രോഗലക്ഷണം. രോഗബാധിതമായ ചെടികൾ എളുപ്പം മണ്ണിനോടുള്ള ബന്ധം വേർപെടുന്നു. രോഗകാരണമായ കുമിളിനെ ലാബറട്ടറിയിൽ വേർതിരിച്ചെടുത്തു. ഫ്യൂസേറിയം ഓക്സിസ്സോറാ എന്ന കുമിളാണ് രോഗത്തിന് കാരണം. ആരോഗ്യമുള്ള ചെടികളിൽ ഈ കുമിളിനെ കുത്തിവെച്ചപ്പോൾ 10 മുതൽ 12 ദിവസത്തിനകം രോഗലക്ഷണങ്ങൾ കണ്ടുതുടങ്ങി.

ഭാരതത്തിൽ ആദ്യമായാണ്^o വാനിലചെടികളിന്മേൽ ഈ രോഗം റിപ്പോർട്ട് ചെയ്യപ്പെടുന്നത്.

REFERENCE

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