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NEW RECORDS

DICOT WEED HOSTS OF *RHIZOCTONIA SOLANI* KUHN.

Sheath blight disease of rice incited by *Rhizoctonia solani* Kuhn. [*Thanatephorus cucumeris* (Frank) Donk] is widely occurring in many rice growing areas of Tamil Nadu. The reaction of certain dicot weed hosts to sheath blight disease of rice was ascertained in the present studies.

The weeds were raised in flower pots and inoculated by placing a single sclerotium of *R. solani* on each of the five selected leaves, which were later covered with absorbent cotton. The inoculated plants were sprayed with sterile water in the morning and evening for three days. The inoculated and water sprayed plants were covered with polythene sheets in order to ensure high percentage of relative humidity. The disease reaction was observed after ten days. The pathogen was re-isolated from the weeds and cross inoculation was done in susceptible ADT–31 rice variety to confirm the pathogenicity.

Among the thirty weeds tested, nineteen showed positive reaction to sheath blight disease (Table 1) while eleven revealed negative reaction to the disease All the nineteen weeds are first host records to sheath blight disease of rice. The results have shown that *R. solani* may perpetuate in weed hosts and may play a role in spreading the disease.

That some weeds may be infected with *R. solani* and function as sources of inoculum to rice has been reported already (Baker and Martinson, 1970). The incidence of the sheath blight disease on several weed hosts was eariler reported from IRRI, Philippines (1972) and by Venkata Rao (1973). Host range studies conducted by Kohli (1966) and Roy (19/3) revealed that the host range of *R. solani* is restricted to plants belonging to Gramineae, Cyperaceae and Commelinaceae. Mahendra Prabhat *et al*. (1973) stated that the fungus was found to infect plants belonging to Pontederiaceae, Zingiberaceae and Papilionaceae under artificial inoculation studies. The present results clsarly showed that the pathogen can infect a wide variety of host plants belonging to several families, namely, Acanthaceae, Compositae, Boraginaceae, Euphorbiaceae, Nyctaginaceae, Amaranthaceae, Convolvulaceae, Aizoaceae, Commelinaceae, Malvaceae, Campanulaceae, Pontederiaceae, Solanaceae, Caesalpiniaceae, Cucurbitacea, Umbelliferae and Aristolochiacea.

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Table 1

Reaction of certain dicot weed hosts to *R. solani*

	Host	Family	Disease reaction
1	*Astercantha longifolia* (Linn.) Ness.	Acanthaceae	+
2	*Cardiospermum halicabum* Linn.	Sapindaceae	—
3	*Blumea amplectens* DC.	Compositae	—
4	*Blumea wightiana* DC.	,,	—
5	*Eclipta prostrata* Linn.	,,	+
6	*Tridax procumbens* Linn.	,,	—
7	*Zinnia e/egens* Jacq.	,,	—
S	*Heliotropium indicum* Linn.	Boraginacae	+
9	*Chrozophora ronleri* \ Geis) Juss ex Spr.	Euphorbiacea	+
10	*Acalypha indica* Linn.	,,	+
11	*Boerhavia diffusa* Linn.	Nyctaginaceae	+
12	*Oldenlandia umbellata* Linn.	Rubiaceae	—
13	*Borreria articularis* Linn.	,,	—
14	*Gomphrena decumbens* Jacq.	Amaranthaceae	+
15	*Achyranthus aspera* Linn.	,,	—
16	*Merremia emarginata* (Burm f) Hall. f	Convolvulacea	+
17	*Trianthema portulacastrum* Linn.	Aizoaceae	+
18	*Commelina nudiflora* Linn.	Commelinaceae	+
19	*Corchorus olitorius* Linn.	Tiliaceae	—
20	*Hibiscus ficulneus* Linn.	Malvaceae	+
21	*Sphenoclea zeylanica* Gaertn.	Campanulaceae	+
22	*Monochoria vaginalis* (Burm. f) Presl. ex. Kunth	Pontederiaceae	+
23	*Eichhornia crassipes* (Mart) Solms.	,,	+
24	*Datura stramonium* Linn.	Solanaceae	+
25	*Lucas aspera* (Willd) Spreng.	Labiatae	—
26	*Cassia occidentalis* Linn.	Caesalpiniaceae	+
27	*Coccinea indica* W.&A.	Cucurbitaceae	+
28	*Centella asiatica* (Linn.) Urban.	Umbelliferae	+
29	*Marsilea quadrifolia*	Marsileaceae	—
30	*Aristolochia bracteolata* Lamk.	Aristolochiaceae	+

+ = Disease development

– = No disease development

സംഗ്രഹം

നെല്ലിന്റെ പോളരോഗത്തിനു് (ഷീത്ത് ബ്ല�ൈറ്റ്) കാരണമായ *കോർട്ടീസിയം സൊളാനി* എന്ന കുമിളിനു്, വിവിധ കുടുംബങ്ങളിൽപ്പെട്ട നിരവധി കളകളേയും ബാധിക്കുന്നതിനുള്ള കഴിവുണ്ടെന്നു കാണുകയുണ്ടായി. നെൽച്ചെടികളുടെ അഭാവത്തിൽ രോഗബീജങ്ങൾ ഈ കളകളിൽ വർദ്ധിക്കുകയും തുടർന്നുള്ള നെൽക്കൃഷിക്കു ഭീഷണിയാകുകയും ചെയ്യാനിടയുണ്ടു്.

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