

Note on the Varietal Response of Sunflower (*Helianthus annuus* L.) to Rust (*Puccinia helianthi* Schw.)

Sunflower is being popularised on a large scale in Tamil Nadu and other states of India to increase the national oil production. Of several diseases, rust disease has gained importance in Tamil Nadu in recent years. Histopathology (Siddiqui, 1972) and control of rust (Ramasamy and Sindha Mathar, 1973) have been reported. The present study reports the varietal reaction of sunflower to rust disease under field conditions of infection.

An experiment was conducted during 1973-74 in randomised strips employing 65 varieties, replicated thrice. A spacing of 30x15 cm was adopted and one plant per hole was maintained. Artificial inoculations of rust disease were made by dusting spore talc mixture (1:500) when the plants were in the early flowering stage to ensure an uniform and sparse distribution of the uredospores on the leaves. The incidence of rust was scored 30 days after inoculation using the modified form of Cobb's Scale as follows.

Grade	Symptom
0	No pustules
1	A few pustules (10) scattered on the surface of the leaf
2	$\frac{1}{4}$ th of the leaf area covered with rust pustules
3	$\frac{1}{2}$ of the leaf area covered with rust pustules
4	The whole leaf area covered with rust pustules

The disease index was transformed to percentage of disease intensity. The observations indicated that none of the varieties was resistant. The varieties tested were found susceptible to *P. helianthi* but exhibited varying degrees of infection. However the varieties EC. 93614, EC. 21991-8-2-1, EC 75268, EC. 22237-1-4-5, EC. 75273, EC 2655-3, EC. 93617 and EC. 21993 (4+5)-1-1 were comparatively less susceptible.

K. SIVAPRAKASAM
K. PILLAYARSAMY
S. GANAPATHY
S. CHIDAMBARAM

Regional Agricultural Research Station
Kovilpatti, Tamil Nadu.

REFERENCES

- RAMASAMY, R. and A. SINDHAMATHAR. 1973. Control of rust disease of sunflower in Tamil Nadu. *Madras agric. J.* 60: 594.
- SIDDIQUI, M. R. 1972. Histopathology of sunflower rust (*Puccinia helianthi* Schw.) and varietal resistance. *Indian J. agric. Sci.* 42: 510-12.