

A Note on the Spray Schedule for the Control of Powdery mildew of Ber in Karnataka

In view of the economic importance of Ber crop an experiment on development of spray schedule for control of powdery mildew caused by *Oidium erysipoides* f.sp. *Ziziphi* was conducted in Northern Dry Zone -3 (Region - II) of Karnataka during 1994-95 and 1995-96. Umran cultivar, Susceptible for powdery mildew, was used in the trail. The objective of the experiment was to work-out effective and economical spray schedule using systemic fungicide (tridemefon) and contact fungicide (wetable sulphur). Totally six sprays were given starting from the flowering stage at 15 days interval (Table 1).

The data was found to be significant. Significantly lower and on par floral infection was recorded in T_1 , T_2 , T_3 , T_5 , T_6 , and T_8 (Table 1). These treatments effectively reduced floral indicating effective nature of systemic fungicide component during flowering stage of Ber plant. The level of powdery mildew of fruit infection was significantly less in these treatment compared T_{10} (Control & T_9 (NSE 5%). Any one of the above treatments can be adopted, under field conditions, for effective

control of powdery mildew of ber. All treatments were significantly superior in reducing powdery mildew in ber compared to unsprayed control (T_{10}). The treatments T_4 , T_7 & T_9 did not control floral infection of powdery mildew effectively compared to T_1 , T_2 , T_3 , T_5 , T_6 , T_8 , (Table -1). Significantly highest powdery mildew to the extent of 76.0 and 69.16 per cent was recorded in control during 1994-95 and 1995-96, respectively.

From the above results it can be concluded that both floral and fruit infection of powdery mildew can reduced significantly by giving six sprays involving either one or two sprays of tridemefon 0.1% at flowering stage of ber plant (T_1 , T_2 , T_3 , T_5 , T_6 and T_8). The treatment of NSE 5% (T_9) alone was not effective in controlling powdery mildew of ber (Table 1). It is suggested to utilize Wettable sulphur as a cheaper substitute to control powdery mildew of ber. Several workers have reported effective nature of Tridemefon in reducing powdery mildews (Sattareddi, 1994, Reddy *et al.* 1990, Rana *et al.* 1991) Anonymous. (1997) recommended use of wettable sulphur and Tridemefon in ber crop.

Department of Plant Pathology, S. A. DESAI
College of Agriculture, Dharwad.

(Received : October, 1997)

References

- ANONYMOUS, 1997, *Improved cultivation practices for horticulture crops*, University of Agricultural Sciences, Dharwad, PP: 75-78.
- RANA, D. P.S., BHARDWAJ, P.K.RAO, M.V. AND CHATTERJEE, D., 1991, Field evaluation of Fenerimol and Tridemefon for the control of powdery mildew of Pea, *Indian Journal of plant Protection*, **19** : 31-35.
- REDDY, M. N., RAO, D.M. AND REDDY, G. S., 1990, Preliminary evaluation of fungicides on ber an alfisols. *Madras Agricultural Journal*, **27** : 229-230.
- SATTAREDDI, A. R., 1994, Studies on powdery mildew of Ber caused by *Oidium erysipoides* f.sp. *Ziziphi*. Yan and Wang, M.Sc. (Agri) Thesis University of Agricultural Sciences, Dharwad, PP: 56-58.

Table 1. Spray schedule for the control of powdery mildew of ber.

Treatments	% Floral infection	% reduction of floral infection over control	% Disease index		Average
			1994-95	1995-96	
T ₁	4.48	95.36	0.43 (4.55)	1.11 (5.98)	0.77 (5.26)
T ₂	2.70	97.21	0.2 (2.81)	0.65 (4.51)	0.4 (3.66)
T ₃	2.16	97.77	0.16 (2.25)	0.62 (4.48)	0.39 (3.36)
T ₄	33.08	65.81	0.26 (2.81)	0.33 (3.27)	0.28 (3.04)
T ₅	3.57	96.31	0.13 (2.06)	0.06 (1.47)	0.09 (1.76)
T ₆	3.31	96.58	0.16 (2.25)	0.05 (1.24)	0.10 (1.74)
T ₇	22.94	76.29	0.30 (4.91)	1.98 (7.98)	1.14 (6.44)
T ₈	6.0	93.78	0.66	1.41	1.03
T ₉	76.89	20.53	46.7 (43.11)	36.33 (37.01)	41.51 (40.05)
T ₁₀	96.76	-	76.00 (60.98)	62.16 (52.06)	69.08 (56.52)
S.E.m±	1.985	-	1.574	0.878	-
CD at 0.05%	5.89	-	4.67	2.60	-
CV %	12.54	-	27.50	12.16	-

Note: T₁ 1+5 (First spray with Tridemefon (0.1%) followed by five sprays with wettable sulphur (0.3%).
T₂ 2+4 (First and fourth spray with Tridemefon (0.1%) and rest with wettable sulphur (0.3%)
T₃ 3+3 (Alternate spray with Tridemefon (0.1%) and wettable sulphur (0.3%) starting first with Tridemefon (0.1%).
T₄ 4+2 (Wettable sulphur (0.3%) after second and fourth spray of Tridemefon (0.1%).
T₅ 5+1 (Wettable sulphur (0.3%) sixth spray).
T₆ 6+0 (All six sprays with Tridemefon 0.1%).
T₇ 0+6 (All six sprays with wettable sulphur 0.3%).
T₈ 3+3+NSE 5% (Six sprays involving three each of Tridemefon (0.1%) and wettable sulphur (0.3%) mixed with Neem seed extract 5% in each spray).
T₉ NSE 5% (All six sprays with only neem seed extract 5% without any fungicide combination).
T₁₀ Control (Un-protected control).