

Table 1 Bio-efficacy of insecticides in reducing larval population of *P. brassicae* during 2009-2010 at Umiam

Treatments	Concentration (%)/Dosage	Pre treatment	Average number of larvae per cabbage head					Yield(t/ha)
			1 DAS	3 DAS	5 DAS	10 DAS	15 DAS	
Annonin	2 ml/l	34.80 <sup>a</sup>	17.53 <sup>c</sup> (49.62)	2.53 <sup>c</sup> (92.72)	0.67 <sup>d</sup> (98.00)	0.33 <sup>d</sup> (99.00)	0.53 <sup>c</sup> (98.47)	15.00 <sup>a</sup>
Azadirachtin (Oil base 300 ppm)	2 ml/l	33.73 <sup>a</sup>	30.73 <sup>b</sup> (8.89)	28.73 <sup>b</sup> (14.82)	30.20 <sup>bc</sup> (10.46)	21.80 <sup>bc</sup> (35.36)	5.87 <sup>b</sup> (82.59)	14.28 <sup>a</sup>
Neem Seed Kernel Extract 300 ppm	2 ml/l	37.13 <sup>a</sup>	36.46 <sup>ab</sup> (1.80)	32.33 <sup>b</sup> (12.92)	31.40 <sup>b</sup> (15.43)	25.73 <sup>b</sup> (30.70)	10.67 <sup>b</sup> (71.26)	14.50 <sup>a</sup>
Garlic extract (1%)	1%	38.33 <sup>a</sup>	29.73 <sup>b</sup> (22.43)	25.93 <sup>b</sup> (32.35)	2.07 <sup>c</sup> (42.42)	12.33 <sup>c</sup> (67.83)	9.80 <sup>b</sup> (74.43)	14.62 <sup>a</sup>
Karanjin	2 ml/l	35.80 <sup>a</sup>	9.80 <sup>c</sup> (72.69)	3.27 <sup>c</sup> (90.86)	0.87 <sup>d</sup> (97.56)	2.80 <sup>d</sup> (92.17)	5.87 <sup>b</sup> (83.60)	13.98 <sup>a</sup>
<i>Bacillus thuringiensis</i> (Bt)	2 ml/l	40.87 <sup>a</sup>	38.67 <sup>ab</sup> (5.38)	33.60 <sup>b</sup> (17.78)	28.60 <sup>bc</sup> (30.02)	20.20 <sup>bc</sup> (50.57)	10.07 <sup>b</sup> (75.36)	14.52 <sup>a</sup>
<i>Beauveria bassiana</i>	1 ml/l	43.00 <sup>a</sup>	33.26 <sup>b</sup> (22.65)	29.26 <sup>b</sup> (31.95)	23.00 <sup>c</sup> (46.51)	14.93 <sup>c</sup> (65.27)	9.40 <sup>b</sup> (78.13)	14.32 <sup>a</sup>
Spinosad 45 SC	1.5 ml/l	37.20 <sup>a</sup>	11.93 <sup>c</sup> (67.93)	2.33 <sup>c</sup> (93.73)	1.27 <sup>d</sup> (96.58)	0.80 <sup>d</sup> (97.84)	0.80 <sup>c</sup> (97.84)	14.60 <sup>a</sup>
Endosulfan 35 EC	2 ml/l	29.73 <sup>a</sup>	9.67 <sup>c</sup> (67.47)	2.07 <sup>c</sup> (93.03)	0.53 <sup>d</sup> (98.21)	0.27 <sup>d</sup> (99.09)	0.40 <sup>c</sup> (98.65)	16.20 <sup>a</sup>
Control	—	45.00 <sup>a</sup>	46.53 <sup>a</sup>	46.00 <sup>a</sup>	47.33 <sup>a</sup>	47.00 <sup>a</sup>	47.00 <sup>a</sup>	8.28 <sup>b</sup>
SEM ±	—	7.476	4.85	3.74	3.66	3.73	2.37	1.22
CD at 5%	—	NS	10.18	7.85	7.68	7.84	4.97	2.56

Note: Same small letter (s) in a column after mean values indicates non-significant different from each other at 5%. Figures in parenthesis are per cent reduction. NS – Non Significant. DAS – Days after spray