

Mating Disruption/SIR

Pandemis Leafroller and Apple

Alan L. Knight
USDA-ARS, Yakima, WA

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Materials and Methods

1. Compared the effectiveness of the Hamaki-con rope dispenser loaded with 170 mg Z11-14 acetate against an experimental dispenser from Consep loaded with 170 mg of a 91:9 ratio of Z11-14 acetate and Z9-14 acetate for pandemis leafroller (PLR) in replicated 0.1 ha plots during the summer. Both dispensers had ca. 3-6% E11-14 acetate as a contaminant.
2. Compared the effectiveness of three dispenser rates of Consep's experimental dispenser versus Hamaki-con for PLR in replicated 0.1 ha plots.
3. Determined the emission rates of the Hamaki-con rope and other experimental membrane dispensers from Consep.

Results

1. Z11-14 acetate alone is equally as good as using a two-component blend, Z11-14 acetate + Z9-14 acetate, in shutting down moth catches of PLR in pheromone-baited traps (Table 1).
2. Excellent trap shut-down occurred during first generation with both dispenser types at rates of 200-400 per acre. During second generation only the rates of 400 dispensers per acre were effective.
3. Hamaki-con released 0.87 to 1.03 mg per day in 1993 tests. The membrane dispenser released only 0.65 mg per day in 1993. The new membrane dispenser from Consep in 1994 released 1.15 mg per day.

Table 1. Catch of male PLR in pheromone baited traps during both generations during 1994 in 0.1 ha plots treated with either Z11-14 acetate alone (Hamaki-con rope dispensers) or 94:6 blend of Z11-14 acetate plus Z9-14 acetate (Consep membrane dispenser).

Dispenser	Rate	# plots	6/1 to 7/31		8/1 to 9/27	
			Mean catch per trap	% reduction	Mean catch per trap	% reduction
Hamaki-con	400	12	0.7	99	7.8	95
Consep	100	9	8.9	86	30.0	80
Consep	200	11	1.8	97	17.3	88
Consep	400	9	1.7	97	8.0	95
Check	--	14	63.3	--	148.4	--

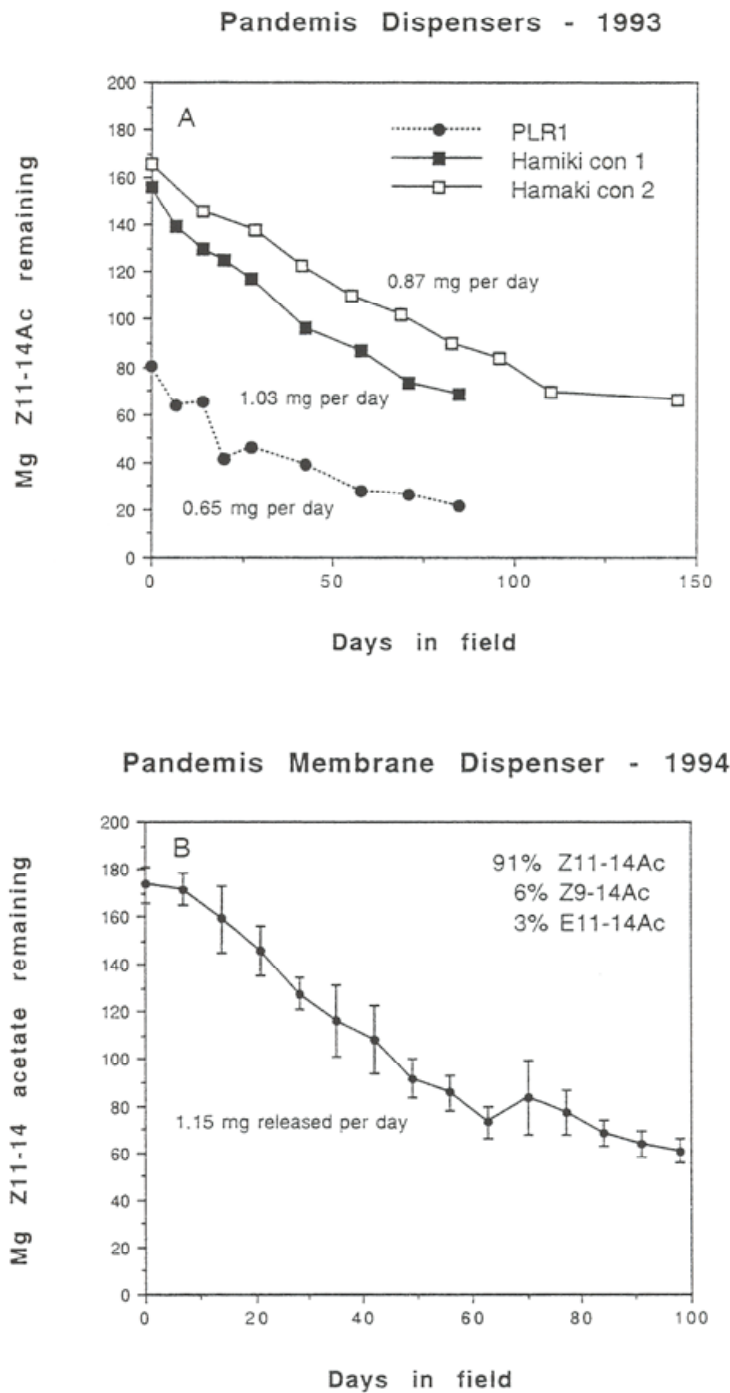


Figure 1. MG of pheromone remaining in field-aged dispensers for (A) a Consep membrane dispenser (PLR1) and the Hamaki-con rope dispenser both loaded with Z11-14 acetate and aged in the field during 1993 and (B) the two-component Consep membrane dispenser in 1994.