

Section II
Foliage & Seed-Feeding & Mining Insects

FFA-IMC-UI CANOLA SCOUTING PROGRAM 1993: INSECT SAMPLING RESULTS
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Four spring-planted canola fields from each of four regions surrounding Reardan and Spangle, Washington and Troy and Genesee, Idaho were monitored weekly for insect pests. Sampling methods included a flight impact trap and a diamondback moth pheromone trap at each field. Sweep net samples were taken in designated treated and untreated areas of two fields in each region when plants began to bolt. Insect numbers were recorded for each species with the exception of aphids which were noted as presence or absence. In order to conduct yield loss assessments, eight one meter square samples of canola plants were cut from treated and untreated areas of each field before harvest.

Canola pests monitored included the cabbage seedpod weevil, diamondback moth, flea beetle, lygus bug, and aphids. Cabbage seedpod weevil adults collected in impact traps and in sweep samples from a representative field is shown in Figure 1. At all sites, weevil numbers remained low. Sweep sample counts in the treated and untreated areas were similar. Population increases may have been inhibited by methyl parathion applications, as indicated at the Swenson site by the inset date, but we believe the primary reason for low weevil numbers was the late planting dates, which allowed the susceptible stage of the crop to escape the peak population of this pest.

In contrast, diamondback moth populations were high in most regions. The numbers of adult moths collected in the pheromone traps at four sites in the Genesee region are illustrated in Figure 2. Adult moths caught in pheromone traps and larvae collected in sweep samples at the Mader farm in the Genesee region are shown in figure 3. The population trends indicate two to three generations during the season. Trends and trap counts were similar in all regions with the exception of Reardan, which had higher counts in both trap and sweep results.

Plant density and yield (pounds/acre) were determined from the field plant samples (Table 1). There was no correlation between the plant density and yield. There was significant difference in yield between the treated and untreated areas of the field at only one site. At this time it is difficult to know if this represents a true appraisal, since we are not comfortable with the yield assessment methods.

Additional insects pests detected by the monitoring program included flea beetles, which were occasionally picked up in the sweep samples, but did not cause notable damage in the sampled fields. Lygus bugs were detected in impact traps and sweep samples, but numbers also remained low. Aphids were a pest problem in most regions, but we were unable to quantify the populations, since we did not have an appropriate sampling method in effect.

Figure 1. Cabbage seedpod weevil counts in spring-planted canola from impact traps and sweep samples, Swenson farm, Troy, Idaho

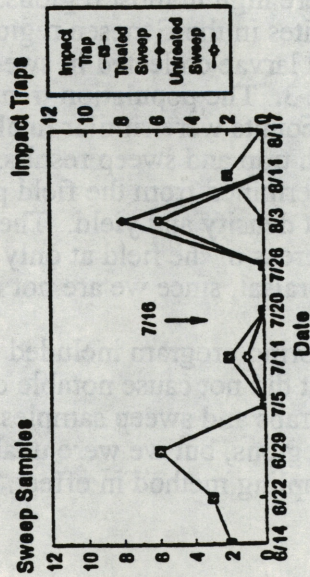


Figure 2. Diamondback moth adults collected in spring-planted canola from pheromone traps at four sites near Genesee, Idaho, 1993

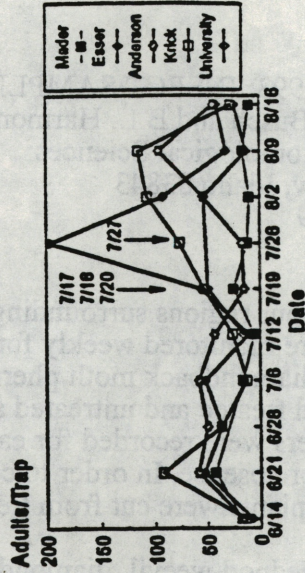


Figure 3. Diamondback moth adult and larvae from the pheromone trap and sweep samples, Mader farm, Genesee, Idaho, 1993

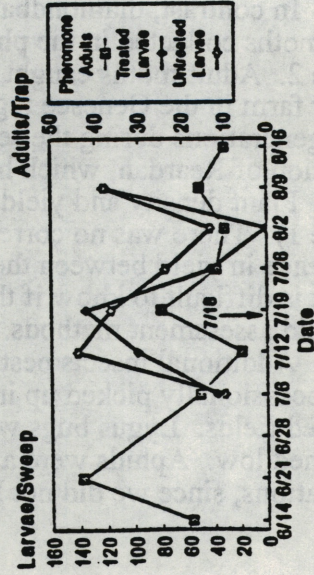


Table 1. Yield loss assessment results from spring-planted canola fields with designated treated and untreated areas, 1993

Region	Field	Plants/Meter		Yield (lb/A)	
		Treated	Untreated	Treated	Untreated
Reardan	Z&Z	89	116	2080	1896
Reardan	Newcomb	102	120	1289	1344
Genesee	Mader	95	100	513	587
Genesee	Anderson	57	29	801	823
Troy	Swenson	118	94	299	244
Troy	Salisbury	84	71	219	249
Spangle	Piersol	81	102	751	1024
Spangle	Slevers	86	102	230a	352b