

TABLE 13.1. Effects of conservation tillage relative to conventional tillage on selected insect pests of field crops

Insect common name	Scientific name	Crop	Tillage	Effect and reference ¹
Southern corn rootworm	<i>Diabrotica undecimpunctata howardi</i>	Corn	No-till	Reduced abundance, reduced injury [9]
Northern corn rootworm	<i>Diabrotica longicornis</i>	Corn	No-till	No consistent effect on abundance or injury [63]
Western corn rootworm	<i>Diabrotica virgifera</i>	Corn	No-till	Increased abundance; no consistent effect on injury [63]
Black cutworm	<i>Agrotis ipsilon</i>	Corn	No-till	Increased injury [63]
European corn borer	<i>Ostrinia nubilalis</i>	Corn	No-till	No effect [1, 63]
Lesser cornstalk borer	<i>Elasmopalpus lignosellus</i>	Corn	No-till	Increased abundance [41] or reduced abundance [1, 2]
Southern corn billbug	<i>Sphenophorus callosus</i>	Corn	Reduced tillage	Increased abundance [1, 4, 24, 56]
Flower thrips	<i>Frankliniella tritici</i>	Cotton	No-till	Reduced abundance [45]
Western flower thrips	<i>Frankliniella occidentalis</i>	Cotton	No-till	Reduced abundance [45]
Tobacco thrips	<i>Frankliniella fusca</i>	Cotton	No-till	Reduced abundance [3, 45]
Cotton aphid	<i>Aphis gossypii</i>	Cotton	Reduced tillage	Increased abundance [43]
Cutworm	<i>Agrotis</i> and <i>Peridroma</i> spp.	Cotton	No-till	Increased injury [42]
Corn earworm	<i>Helicoverpa zea</i>	Peanuts	Strip-till	Reduced abundance [16]
Granulate cutworm	<i>Agrotis subterranea</i>	Peanuts	Strip-till	Reduced abundance [16]
Velvetbean caterpillar	<i>Anticarsia gemmatalis</i>	Peanuts	Strip-till	Reduced abundance [16]
Lesser cornstalk borer	<i>Elasmopalpus lignosellus</i>	Peanuts	Strip-till	Reduced injury [16]
Wireworm	Various <i>Elateridae</i> species	Peanuts	Strip-till	Reduced injury [16]
Three-cornered alfalfa hopper	<i>Spissistilus festinus</i>	Peanuts	Strip-till (wheat residue)	Increased injury [16]
Green cloverworm	<i>Hypena scabra</i>	Soybeans	No-till	Increased egg laying [61]; increased abundance [66]
Seedcorn maggot	<i>Delia platura</i>	Soybeans	No-till	Increased abundance and injury [22, 32]
Hessian fly	<i>Mayetiola destructor</i>	Wheat	No-till	Increased abundance [17, 20, 52, 69]; no effect [13]
Cereal aphid	<i>Rhopalosiphum padi</i> , <i>Rhopalosiphum maidis</i> , <i>Schizaphis graminum</i> and <i>Sitobion avenae</i>	Wheat	No preplant tillage	Increased abundance [33]

¹ Abundance or egg laying refers to insect and injury to crop.