

Table 1.3 Studies identifying stored-product insect species found at various locations in the marketing system.

Species	Number of the Studies 1-12 with Species Present												Total
	1	2	3	4	5	6	7	8	9	10	11	12	
<i>Lasioderma serricorne</i> (Fabricius)	1	1	1	1		1	1	1	1	1	1	1	11
<i>Oryzaephilus surinamensis</i> (Linneaus)	1	1	1	1	1	1	1	1		1	1	1	11
<i>Rhyzopertha dominica</i> (Fabricius)	1	1	1	1	1	1	1		1	1	1	1	11
<i>Tribolium castaneum</i> (Herbst)	1	1	1	1	1		1	1	1	1	1	1	11
<i>Alphitobius diaperinus</i> (Panzer)	1	1	1	1	1	1	1		1		1	1	10
<i>Cadra cautella</i> (Walker)	1		1	1	1	1	1		1	1	1	1	10
<i>Ahasverus advena</i> (Waltl)	1	1	1	1	1		1			1	1	1	9
<i>Plodia interpunctella</i> (Hübner)	1		1	1	1	1	1		1	1		1	9
<i>Stegobium paniceum</i> (Linneaus)	1	1		1		1	1	1	1	1		1	9
<i>Tenebroides mauritanicus</i> (Linneaus)	1	1	1	1		1	1		1		1	1	9
<i>Oryzaephilus mercator</i> (Fauvel)	1	1		1	1		1	1		1		1	8
<i>Sitophilus oryzae</i> (Linneaus)	1	1		1			1		1	1	1	1	8
<i>Tribolium confusum</i> Jacquelin du Val	1	1	1	1			1	1	1			1	8
<i>Carpophilus dimidatus</i> (Fabricius)		1	1	1		1	1			1	1		7
<i>Carpophilus hemipterus</i> (Linneaus)	1	1	1	1	1	1	1						7
<i>Cryptolestes ferrugineus</i> (Stephens)	1	1	1				1			1	1	1	7
<i>Dermestes maculatus</i> Degeer	1	1	1	1	1		1					1	7
<i>Lophecaeres pusillus</i> Klug	1	1	1	1	1						1	1	7
<i>Necrobia rufipes</i> (DeGeer)	1	1	1	1	1	1	1						7
<i>Typhaea stercorea</i> (Linneaus)	1	1	1		1		1			1		1	7
<i>Araecerus fasciculatus</i> (De Geer)		1	1	1			1			1	1		6
<i>Gnatocerus cornutus</i> (F.)	1		1			1	1	1	1				6

<i>Sitotroga cerealella</i> (Oliver)			1			1	1		1	1	1	6
<i>Carpophilus obsoletus</i> Erichson		1		1	1				1	1		5
<i>Cathartus quadricollis</i> (Guerin)	1	1	1					1		1		5
<i>Dermestes ater</i> DeGeer	1		1	1		1	1					5
<i>Dermestes frischii</i> Kugelann	1	1	1	1							1	5
<i>Latheticus oryzae</i> Waterhouse		1	1				1		1	1		5
<i>Palorus subdepressus</i> (Wollaston)		1	1	1			1			1		5
<i>Alphitobius laevigatus</i> (F.)		1			1	1			1			4
<i>Attagenus unicolor</i> (Brahm)	1	1						1			1	4
<i>Callosobruchus chinensis</i> (Linnaeus)		1	1	1			1					4
<i>Callosobruchus maculatus</i> (Fabricius)		1	1	1							1	4
<i>Carpophilus pilosellus</i> Motschulsky				1				1		1	1	4
<i>Corcyra cephalonica</i> (Stainton)			1				1			1	1	4
<i>Cryptolestes turcicus</i> (Grouvelle)		1	1							1	1	4
<i>Demestes carnivorus</i> F.	1		1	1			1					4
<i>Dermestes lardarius</i> Linnaeus	1	1	1					1				4
<i>Ephestia elutella</i> (Hübner)	1								1	1		4
<i>Ephestia kuehniella</i> (Zeller)	1		1			1			1			4
<i>Sitophilus zeamais</i> Motschulsky		1								1	1	4
<i>Acanthoscelides obtectus</i> (Say)			1				1			1		3
<i>Attagenus fasciatus</i> (Thunberg)	1		1				1					3
<i>Cartodere constricta</i> (Gyllenhal)		1	1				1					3
<i>Cryptolestes pusillus</i> (Schonherr)	1	1								1		3
<i>Gnatocerus maxillosus</i> (F.)			1				1			1		3
<i>Thaneroclerus buqueti</i> (Lefebure)*		1	1	1								3
<i>Thorictodes heydeni</i> Reitter		1	1				1					3
<i>Trogoderma variable</i> Ballion							1		1		1	3
<i>Alphitophagus bifasciatus</i> Say			1							1		2
<i>Cadra figulilella</i> (Gregson)	1								1			2
<i>Caryedon serratus</i> (Oliver)		1		1								2
<i>Cryptophilus integer</i> (Heer)		1					1					2

<i>Dienerella argus</i> (Reitter)	1					1	2
<i>Dinoderus bifoveolatus</i> (Wollaston)		1				1	2
<i>Dinoderus minutus</i> (Horn)				1		1	2
<i>Endrosis sarcitrella</i> (L.)		1			1		2
<i>Eufallia seminivea</i> (Motschulsky)	1		1				2
<i>Gibbium psylloides</i> (Czenp.)		1		1			2
<i>Hofmannophila pseudospretella</i> (Stainton)		1			1		2
<i>Mezium americanum</i> (Laporte)	1			1			2
<i>Monanus concinnulus</i> (Walker)	1	1					2
<i>Necrobia ruficollis</i> (F.)			1	1			2
<i>Nemapogon granella</i> (L.)		1				1	2
<i>Palorus ratzeburgii</i> (Wissmann)		1		1			2
<i>Pharaxonotha kirschii</i> Reitter	1		1				2
<i>Prostephanus truncatus</i> (Horn)	1					1	2
<i>Pyralis farinalis</i> Linneaus		1			1		2
<i>Sitophilus granarius</i> (L.)				1	1		2
<i>Tenebrio molitor</i> (Linneaus)	1	1					2
<i>Tinea pellionella</i> (L.)		1		1			2
<i>Tribolium destructor</i> Uytt		1			1		2
<i>Trogoderma granarium</i> Everts		1				1	2
<i>Trogoderma inclusum</i> LeConte					1	1	2
<i>Trogoxylon aequale</i> (Wollston)					1	1	2
<i>Zabrotes subfasciatus</i> (Boheman)		1	1				2
<i>Adistemia watsoni</i> Wollaston	1						1
<i>Alphitobius</i> spp						1	1
<i>Amphicerus cornutus</i> (Pallas)						1	1
<i>Anatrachyntis rileyi</i> (Walsingham)						1	1
<i>Anthicus floralis</i> (L.)					1		1
<i>Anthrenus flavipes</i> LeConte		1					1
<i>Anthrenus oceanicus</i> Fauvel				1			1
<i>Anthrenus verbasci</i> (Linneaus)						1	1

<i>Attagenus undulata</i> Motschusky		1	1
<i>Carcinops pumilis</i> (Erichson)	1		1
<i>Carpophilus humeralis</i> (Fabricius)		1	1
<i>Carpophilus ligneus</i> Murray	1		1
<i>Carpophilus maculatus</i> Murray	1		1
<i>Carpophilus mutilatus</i> Erichson	1		1
<i>Coelopalorus foveicollis</i> (Blair)		1	1
<i>Conotelus stenoides</i> Murray	1		1
<i>Corticaria gibbosa</i> (Herbst)	1		1
<i>Cortinicaria cavicollis</i> (Herbst)	1		1
<i>Cryptolestes klapperichi</i> Lefkovitch	1		1
<i>Cryptolestes pusilloides</i> (Steele & Howe)	1		1
<i>Cryptophagus cellaris</i> (Scopoli)	1		1
<i>Cryptophagus pilosus</i> Gyllenhall		1	1
<i>Cryptophagus varus</i> (Woodroffe and Combs)		1	1
<i>Dienerella costulata</i> (Reitter)	1		1
<i>Dienerella ruficollis</i> (Marsham)	1		1
<i>Diocalandra impressicollis</i> (Quedenf.)	1		1
<i>Doliema plana</i> (Fabricius)		1	1
<i>Ephestiodes gilvescentella</i> Ragonot		1	1
<i>Elasmolomus sordidus</i> (F)	1		1
<i>Exkorynetes analis</i> (Klug)*	1		1
<i>Gonocephalum prolixum</i> (Er.)	1		1
<i>Heterobostrychus brunneus</i> (Murray)	1		1
<i>Holoparamecus depressus</i> Curtis	1		1
<i>Hypothenemus hampei</i> (Ferrari)	1		1
<i>Laemotmetus rhizophagoides</i> (Wlk.)	1		1
<i>Leurostenus filum</i> Mshl.	1		1
<i>Lyctocoris campestris</i> (Fabricius)*	1		1
<i>Mezium affine</i> Boield.	1		1
<i>Minthea rugicollis</i> Walker	1		1

<i>Murmidus ovalis</i> (Beck)			1	1
<i>Murmidus segregatus</i> Waterhouse	1			1
<i>Mussidia nigrivenella</i> Rag.	1			1
<i>Necrobia violacea</i> (L.)	1			1
<i>Orphinus fulvipes</i> (Guer.)	1			1
<i>Paralipsa gularis</i> (Zeller)			1	1
<i>Pentarthrum cylindricum</i> Woll.	1			1
<i>Plochionus pallen</i> (F.)	1			1
<i>Ptinus californicus</i> Pic			1	1
<i>Ptinus clavipes</i> Panzer			1	1
<i>Ptinus cognatus</i> Fall			1	1
<i>Ptinus extendus</i> Smith			1	1
<i>Ptinus tectus</i> Boieldieu			1	1
<i>Ptinus vertriculus</i> LeConte			1	1
<i>Pyralis manihotalis</i> Guenee			1	1
<i>Silvaninus consors</i> Sharp	1			1
<i>Silvanoprus cephalotes</i> (Erichson)	1			1
<i>Silvanoprus longicollis</i> Reitter	1			1
<i>Silvanus bidentatus</i> (Fabricius)			1	1
<i>Silvanus lewisi</i> Reitter	1			1
<i>Silvanus proximus</i> Grouvelle	1			1
<i>Silvanus unidentatus</i> (Oliver)		1		1
<i>Sinoxylon anale</i> Lesne		1		1
<i>Sitophilus linearis</i> (Herbst)	1			1
<i>Tenebrio guineense</i> Imhoff.		1		1
<i>Tenebrio nanus</i> (Melsheimer)			1	1
<i>Tinea columbariella</i> Wocke		1		1
<i>Tineola bisselliella</i> (Hummel)		1		1
<i>Tribolium anaphe</i> Hinton		1		1
<i>Tribolium audax</i> Halstead			1	1
<i>Tricorynus confusus</i> (Fall)			1	1

<i>Tricorynus tabaci</i> (Guerin-Meneville)										1			1	
<i>Trigonogenius globulus</i> Solier										1			1	
<i>Trogoderma anthrenoides</i> (Sharp)							1						1	
<i>Trogoderma glabrum</i> (Herbst)										1			1	
<i>Trogoderma grassmani</i> Beal										1			1	
<i>Trogoderma megatomoides</i> Reitter					1								1	
<i>Trogoderma ornatum</i> (Say)										1			1	
<i>Trogoderma simplex</i> Jayne										1			1	
<i>Trogoderma sternale</i> Jayne										1			1	
<i>Vitula edmandsae serratilineelia</i> Ragonot										1			1	
<i>Xylocoris flavipes</i> (Reuter)*					1								1	
Total			33	60	80	32	22	16	48	12	41	37	22	26

Study 1= Olsen 1981, 2=Zimmerman 1990, 3=Howe and Feeman 1955, 4=Kirtani et al. 1959, 5=Stanaway et al. 2001, 6=Evans and Porter 1965, 7=Loschiavo and Okumura 1979, 8=Hankin and Welch 1991, 9=Strong 1970, 10=Leos-Martinez 1991, 11=Highland 1978, 12=Olsen et al. 1987