

Supplementary table 1. Capture of insect pests blown toward the insulated conductor wires by double- and single-charged dipolar electric field screens				
Insect pests tested	Voltage required to completely capture insects (kV)			
	Double-charged type			Single-charged type
	1	2	3	5 ^a
Whiteflies	0.8	1.0	1.2	2.7
Green peach aphids	1.0	1.0	1.2	3.2
Western flower thrips	1.5	2.0	2.0	4.2
Tomato leaf-minor flies	1.2	1.5	1.5	4.2
^a Wind velocity of blowing (m/sec)				

Supplementary table 2. Insects avoiding a dipolar electric field

Order	Family	Genus and species	Common name	Voltage (kV) of avoidance
Coleoptera	Anobiidae	<i>Lasioderma serricorne</i>	Cigarette beetle	0.8
	Attelabidae	<i>Euops splendidus</i>	Leaf-rolling weevil	1.8
	Bruchidae	<i>Callosobruchus chinensis</i>	Azuki bean weevil	1.2
	Cerambycidae	<i>Chlorophorus annularis</i>	Bamboo longicorn beetle	2.8
		<i>Phytoecia rufiventris</i>	Chrysanthemum longicorn beetle	1.9
		<i>Argopistes coccinelliformis</i>	Ladybug mimicking leaf beetle	3.2
	Chrysomelidae	<i>Aulacophora femoralis</i>	Cucurbit leaf beetle	1.3
		<i>Chrysolina aurichalcea</i>	Mugwort leaf beetle	1.9
		<i>Gallerucida bifasciata</i>	Dioscorea leaf beetle	2.8
		<i>Gastrophysa atrocyanea</i>	Japanese green duck leaf beetle	1.2
		<i>Gonioctena rubripennis</i>	Wisteria leaf beetle	2.8
		<i>Lema cirsicola</i>	Leaf beetle	2.8
		<i>Ophraella communa</i>	Ragweed leaf beetle	1.2
		<i>Coccinella septempunctata</i>	Seven-spotted ladybird beetle	2.4
		<i>Aiolocaria hexaspilota</i>	Ladybird beetle	1.2
		<i>Epilachna vigintioctopunctata</i>	Twentyeight-spotted ladybird beetle	2.4
		<i>Harmonia axyridis</i>	Asian ladybird beetle	2.1
		<i>Anosimus decoratus</i>	Weevil	2.5
	Curculionidae	<i>Episomus turritus</i>	Weevil	4.3
		<i>Eugnathus distinctus</i>	Weevil	3.2
		<i>Nesalcidodes trifidus</i>	Snout weevil	4.3
	Elateridae	<i>Pectocera fortunei</i>	Click beetle	2.1
	Meloidae	<i>Epicauta gorhami</i>	Blister beetle	0.4
	Mordellidae	<i>Mordella brachyura</i>	Tumbling flower beetle	3.2
	Oedemeridae	<i>Xanthochroa atriceps</i>	False blister beetle	4.5
	Rhynchophoridae	<i>Sitophilus oryzae</i>	Rice weevil	4.5
		<i>Plesiophthalmus nigrocyaneus</i>	Mimawari beetle	4.5
		<i>Tribolium castaneum</i>	Red flour beetle	2.4
	Tenebrionidae	<i>Uloa latimanus</i>	Black fungus beetle	0.5
Hemiptera	Aleyrodidae	<i>Bemisia tabaci</i>	Sweet potato whitefly	0.9
	Aphididae	<i>Myzus persicae</i>	Green peach aphid	1.5
	Cicadellidae	<i>Nephotettix cincticeps</i>	Green rice leafhopper	0.3
	Tettigellidae	<i>Bothrogonia ferruginea</i>	Black tipped leafhopper	0.5
	Lygaeidae	<i>Geocoris varius</i>	Large white-spotted seed bug	1.2
		<i>Metochus abbreviatus</i>	Large white-spotted seed bug	0.8
	Pentatomidae	<i>Eurydema rugosa</i>	Cabbage bug	1.1
	Agromyzidae	<i>Liriomyza sativae</i>	Tomato leaf-minor	1.2
Diptera	Bibionidae	<i>Bibio japonicus</i>	Love bug	0.8
	Culicidae	<i>Aedes albopictus</i>	Asian tiger mosquito	0.5
	Drosophilidae	<i>Drosophila melanogaster</i>	Vinegar fly	1.7
	Ephydriidae	<i>Scatella stagnalis</i>	Greenhouse shore fly	1.7
	Psychodidae	<i>Clogmia albipunctatus</i>	Bath room fly	1.7
	Anthophoridae	<i>Tetralonia nipponensis</i>	Long-horned bee	1.6
	Chalcididae	<i>Brachymeria lasus</i>	Chalcid wasp	0.9
	Formicidae	<i>Formica japonica</i>	Japanese wood ant	0.2
Lepidoptera	Sphecidae	<i>Sphex argentatus</i>	Digger wasps	4.2
	Geometridae	<i>Biston robustus</i>	Lilac beauty	1.4
	Tineidae	<i>Tineola bisselliella</i>	Common clothes moth	1.4
Blattodea	Blattellidae	<i>Blattella germanica</i>	German cockroach	1.8
	Blattidae	<i>Neostylopyga rhombifolia</i>	Harlequin cockroach	1.2
Thysanoptera	Thripidae	<i>Frankliniella occidentalis</i>	Western flower thrips	1.2
Mantodea	Mantidae	<i>Tenodera aridifolia</i>	Praying mantis	0.7
Psocoptera	Liposcelidae	<i>Liposcelis bostrychophilus</i>	Book louse	0.6
Dermaptera	Anisolabididae	<i>Dermaptera</i> sp.	Earwig	0.7
Orthoptera	Tetragoidea	<i>Acridium japonicum</i>	Bolivar	1.1
Isopoda	Armadillidiidae	<i>Armadillidium vulgare</i>	Pill bug	1.6
	Rhinotermitidae	<i>Coptotermes formosanus</i>	Oriental termite	1.6
Araneae	Araneus	<i>Araneus ventricosus</i>	Orb-weaving spider	2.2
	Pardosa	<i>Pardosa astrigera</i>	Wolf spider	2.1
	Pisauridae	<i>Dolomedes sulfureus</i>	Fishing spider	2.3
	Thomisidae	<i>Thomisus labefactus</i>	Crab spider	2.8
	Uloboridae	<i>Octonoba varians</i>	Zebra spider	2.3

Supplementary table 3. Exclusion of insect pests from a greenhouse furnished with single-charged dipolar electric field screens

Test insect pests	Installment of single-charged dipolar electric field screens	Number of pests entering the rooms					
		1	2	3	4	5	6 ^a
Whiteflies	yes	0	0	0	0	0	0
	no	4285	6583	7255	4001	5890	6661
Green peach aphids	yes	0	0	0	0	0	0
	no	0	0	0	0	0	0
Western flower thrips	yes	0	0	0	0	0	0
	no	0	0	0	0	0	0
Tomato leaf-minor flies	yes	0	0	0	0	0	0
	no	285	583	255	401	589	361

a Number of experiment