

Spotted wing drosophila host list

The following list of known or suspected host plants for SWD has been generated through a literature search. The list continues to be monitored and updated as information comes to hand.

Field collected – major host

The following plants have records of SWD being collected from fruit “in-field”. These plants are considered to be the most important hosts for the spotting wing drosophila based on infestation rates and commercial impacts, though it is noted that not all of the listed hosts are grown on large scales.

Cerasus mahaleb (Mahaleb cherry), *Cerasus vulgaris* (dwarf cherry), *Elaeagnus multiflora* (silver berry), *Fragaria ananassa* (strawberry), *Myrica rubra* (red bayberry), *Prunus armeniaca* (apricot), *Prunus armeniaca x salicina* (plumcot), *Prunus avium* (cherry), *Prunus buegeriana* (shirozakura), *Prunus domestica* (plum), *Prunus donarium* (wild cherry), *Prunus japonica* (Korean cherry), *Prunus mume* (Asian plum, Japanese apricot), *Prunus persica* (peach), *Prunus persica* var. *nucipersica* (nectarine), *Prunus salicina* (Japanese plum), *Prunus sargentii* (Sargents cherry), *Prunus serrulata* (Japanese mountain cherry), *Prunus yedoensis* (Tokyo cherry), *Rubus armeniacus* (Himalayan blackberry), *Rubus fruticosus* (blackberry, marionberry), *Rubus ideaus* (raspberry), *Rubus lacinatus* (evergreen blackberry), *Rubus loganobaccus* (boysenberry), *Rubus parvifolius* (Japanese raspberry), *Rubus x loganobaccus* (loganberry), *Vaccinium angustifolium* (blueberry), *Vaccinium corymbosum* (blueberry), *Vitis labrusca* (concord grapes), *Vitis vinifera* (table grapes, wine grapes)

Field collected – minor

The following lists of hosts have records of field grown fruit being impacted, though the relative scale of that impact is modest. These hosts might be impacted commercially.

Alangium platanifolium, *Ampelopsis glandulosa* (porcelain berry), *Aucuba japonica* (Japanese aucuba), *Eugenia uniflora* (Surinam cherry), *Lycium barbarum* (goji berry), *Morus rubra* (red mulberry), *Phytolacca americana* (American pokeweed), *Vaccinium marccarpon* (cranberry)

Not commercially affected

The following list of plants are reported to be hosts of SWD in various literature, but there is no reports of commercial impact. This may be due to fruit only becoming susceptible after commercial harvest (e.g. hardy kiwi), or that the fruits are not commercially important. There is some overlap with the non-crop hosts.

Actinidia arguta (hardy kiwi), *Arbutus unedo* (strawberry tree), *Cotoneaster* sp. (cotoneaster), *Crataegus* spp. (hawthorne), *Diospyros virginiana* (American persimmon), *Ficus carica* (fig), *Maclura pomifera* (Osage orange), *Malus* spp. (crabapple), *Murraya paniculata* (orange jessamine), *Musa acuminata* (banana), *Prunus caroliniana* (sherry laurel), *Prunus lusitanica* (Portuguese laurel), *Prunus maritima* (beach plum), *Rosa rugosa* (wild rose, rose hips), *Rubus allegheniensis* (Allegheny blackberry), *Sapindus* spp. (soapberry), *Skimmia japonica* (red skimmia), *Solanum dulcamara* (bitter sweet nightshade), *Solanum nigrum* (black nightshade), *Solanum villosum* (red nightshade), *Sorbus* spp. (mountain ash), *Taxus cuspidata* (Japanese yew)

Non-crop hosts

The following plants are listed as hosts of SWD, but are not recognised as being commercial crops at any scale. However, these plants might be important refuges for SWD populations that would aid its establishment and spread.

Berberis aquifolium (Oregon-grape), *Cornus amomum* (silky dogwood), *Cornus foemina* (stiff dogwood), *Cornus housa* (Japanese dogwood), *Cornus sericea* (red-twig dogwood), *Elaeagnus umbellata* (autumn olive), *Frangula alnus* (alder buckthorn), *Gaultheria shallon* (salal), *Hippophae rhamnoides* (sea buckthorn), *Lindera benzoin* (spice bush), *Lonicera caerulea* (blue honeysuckle), *Lonicera japonica* (Japanese honeysuckle), *Rhamnus alpina*, *Sambucus cerulea* (blue elderberry), *Sambucus nigra* (black elder, European elder), *Sarcococca hookeriana* (sweet box), *Symphoricarpos* spp. (snowberry)

Fallen fruit only

The following plants have been recorded as hosts of SWD, but the only records are from fallen and likely overripe fruits. While these fruits would not be commercially impacted, the presence of these as potential breeding hosts might assist the establishment and spread of SWD.

Alangium platanifolium, *Aucuba japonica* (Japanese laurel), *Citrus sinensis* (orange), *Citrus x paradisi* (grapefruit), *Cornus controversa* (dogwood), *Gaultheria adenostrix* (akamono), *Malus domestica* (apple), *Morus australis* (silkworm mulberry), *Prunus nipponica*, *Psidium cattleianum* (strawberry guava), *Rubus crataegifolius* (niu die du), *Rubus microphyllus*, *Rubus spectabilis* (salmon berry), *Torreya nucifera* (Japanese torreyia), *Viburnum dolatatum* (Linden viburnum)

Damaged fruit only

The following plants have been recorded as hosts of SWD, but the only records are from fruits that are cut or damaged. While these fruits would not be commercially impacted, the presence of these as potential breeding hosts might assist the establishment and spread of SWD.

Diospyros kaki (persimmon), *Eriobotrya japonica* (loquat), *Lycopersicon esculentum* (tomato), *Malus pumila* (paradise apple), *Pyrus communis* (pear), *Pyrus pyrifolia* (Asian pear, nashi pear), *Ribes* spp. (black currant, red currant)

Laboratory reared

The following plants have been recorded as hosts of SWD, but the only under laboratory conditions, often through “no choice” tests. While these plants might host SWD populations in the field, their importance is not known.

Morus alba (mulberry), *Morus nigra* (black mulberry), *Prunus laurocerasus* (cherry-laurel), *Ribes uva-crispa* (gooseberry), *Vaccinium myrtillus* (bilberry)

Unconfirmed

The following plants have been listed as potentially hosts of SWD in some literature, but the status is uncertain.

Actinidia chinensis (Chinese gooseberries), *Actinidia deliciosa* (kiwifruit), *Styrax japonicus* (Japanese snowbell)

Discussion

While much of the focus on SWD is related to its status as a serious pest of soft and thin-skinned fruits (notably berries, summerfruit, cherries and grapes), evidence gathered is that this pest has a potentially very wide host range. In the event of an incursion this wide host range, including many wild and ornamentally cultivated plants, would likely provide a significant habitat for this pest. The wide host range will also complicate local pest management, providing population sources outside of managed crops.