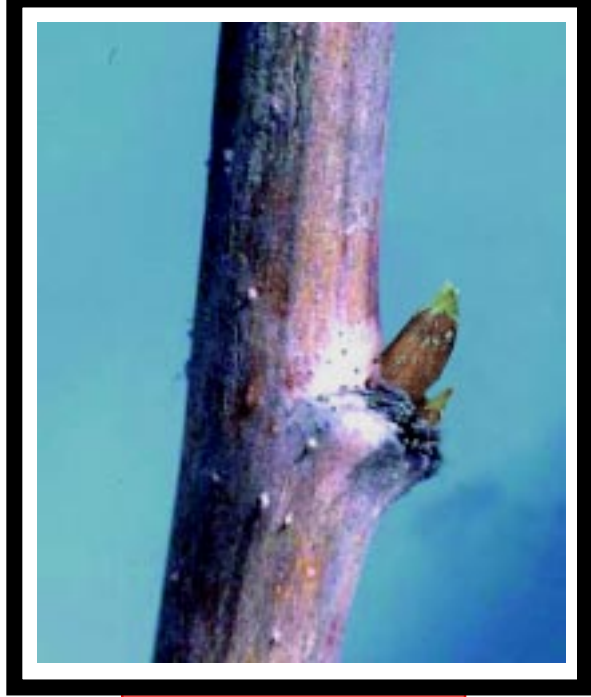


# RASPBERRY IPM



## Growth Stages



Early Green Tip



Bud Burst



Lateral Development



Flower Bud Separation



Early Bloom



Full Bloom



Ripe Fruit

## Leaf Disorders

Bacterial blight (*Pseudomonas* sp.). Wilting and blackening of new shoots and leaves.



Two-spotted spider mite injury.



Leafroller caterpillar usually found in a rolled up leaf. Photo courtesy S. Fitzpatrick, PARC



Adult black vine weevil. Damage to buds and new laterals. Actual size



Boron deficiency. Death of growing point and branching of new shoots.

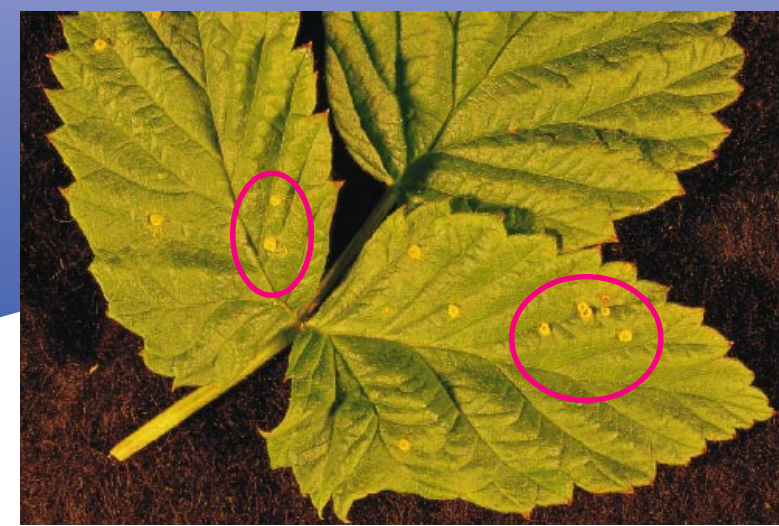


Early symptoms



Advanced symptoms

Magnesium deficiency. Yellowing between veins of older leaves. Margins stay green.



Yellow rust pustules on leaves.



Aphids—immatures and a winged adult. Feed on shoot tips under surface of leaves.



Spur blight. Leaf infection with brown wedge-shaped centre surrounded by yellow tissue.

## Cane Disorders

Botrytis cane wilt on primocanes. Most common from June onward.



Botrytis cane wilt on primocane. Sporulation of the fungus occurs during wet conditions in the summer.



Anthraxnose of canes. Patches on canes with purplish margins and greyish centres. Canes can become girdled and die.



Botrytis cane wilt on floricanes with sclerotia (large black structures circled) which form in late fall and winter.



Spur blight. Infected cane turns silver-grey in winter and produces small, black dots (circled) that contain spores.



## Root/Crown Disorders

Weevil grub. Feeds on roots and weakens plants. Actual size



Phytophthora root rot.



Crown gall on roots.



Crown borer. Larva and damage. Actual size

## Fruit Disorders

Crumbly berry. May be caused by raspberry bushy dwarf virus, poor pollination, nutrient deficiency or genetic problems.



Botrytis fruit rot (spot mould).



## Fruit Contaminants



Adult fruitworm. Larva feeds on flowers and burrows inside berry. Photo courtesy of S. Fitzpatrick, PARC

Actual size



Slug on leaf.



Leafroller.



Black vine weevil.

## Native Beneficials

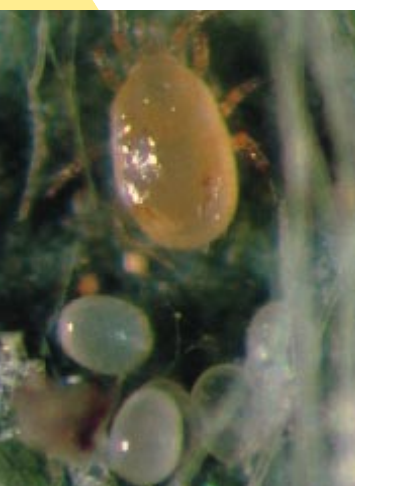
Ladybird beetle—larva. Feeds mainly on aphids. Actual size



Adult ladybird beetle. Feeds on aphids. Photo courtesy of D. Raworth, PARC



Predatory mite. Fast moving, feeds on spider mites. Photo courtesy of D. Raworth, PARC



Ground beetle. Feeds on weevil grubs, leatherjackets, and slugs. Photo courtesy of D. Raworth, PARC



Adult Stethorus. Feeds on mites, appears in July. Photo courtesy of D. Raworth, PARC

Actual size



Stethorus larva. Feeds on mites. Photo courtesy of D. Raworth, PARC

Actual size



Syrphid larva feeding on an aphid.