

Dormant: No visible indication of growth

Insect Pest: Apple Twig Borer

Description: Beetles are brown to black in color, cylindrical shaped, and 3/8" long.

When to Look: Late winter or early spring while vines are dormant.

Where to Look: At base of dormant canes near bud.

What to Look For: Holes about 3/16" in diameter. Beetles can be detected on canes in spring at the 3-6" shoot growth.

Sampling: Presence and density of holes.



Bud Swell: The bud has swollen out of the hard outer bud scale and bulge of leaf tissue is visible, appearing green or pink.

Note: "Sap balls" or "pearls" may be found on the underside of leaves in the spring. Do not confuse these with insect or mite eggs.

Insect Pest: Spider Mites

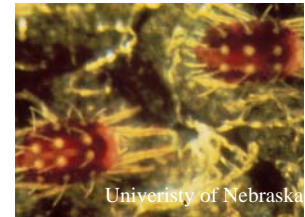
Description: Adults range from dark red/reddish-brown (European Red mite) to dull green/brown (two-spotted spider mite). They have eight legs and are 1/50" long. Eggs are globe-shaped and very tiny.

When to Look: Early in growing season from early shoot growth (1-4") to 20 days post-bloom.

Where to Look: Underside of leaves.

What to Look For: Clusters of mites within fine webbing. Stunted, chlorotic shoots with small leaves and characteristic pinpoint necrotic area (stippling) on leaves.

Sampling: Estimate number of mites on average of ten leaves.



Insect Pest: Climbing Cutworm

Description: Cutworm caterpillar is dull gray brown and 1 1/5" - 1 1/2" in length when fully grown.

When to Look: In early May from bud swell until shoots are 3/8" - 5/8" long.

Where to Look: Buds and leaves.

What to Look For: Feeding damage on primary buds. Presence of caterpillars and feeding damage on leaves.

Sampling: Approximate average percent damage of buds and foliage.

Notes: Caterpillars hide during the day under bark and in soil litter, and emerge at night to feed.



Insect Pest: Grape Flea Beetle

Description: Beetles are shiny, metallic dark blue, and 3/16" long.

When to Look: Late April until buds have grown to a length of 1/2" or more.

Where to Look: Buds and canes.

What to Look For: Adult beetles feeding on young buds. Buds are chewed on the sides and ends, and hollowed out. Feeding on upper and lower leaf surfaces.

Sampling: Monitor vineyard border adjacent to woods or protected areas and in center of the vineyard. Inspect vines at four locations and record percent of bud damage.



Insect Pest: Grape Mealybug

Description: Nymphs are soft, oval, pale yellow without a waxy covering.

When to Look: April when buds begin to swell.

Where to Look: Base of buds. When buds open, nymphs feed in clusters at the bases of new

shoots and leaves.

What to Look For: Honeydew on foliage, twigs, and fruit hat is produced by feeding insects.

Sampling: Estimate average number of crawlers (mobile nymphs) on bud areas.



Bud Break: The leaves have separated at the tip, usually exposing the growing point. No leaf is, as yet, at a right angle to the growing stem.

Insect Pest: Climbing Cutworm

Description: Cutworm caterpillar is dull gray brown and 1 1/5" - 1 1/2" in length when fully grown.

When to Look: In early May from bud swell until shoots are 3/8" - 5/8" long.

Where to Look: Buds and leaves.

What to Look For: Feeding damage on primary buds. Presence of caterpillars and feeding damage on leaves.

Sampling: Approximate average percent damage of buds and foliage.

Notes: Caterpillars hide during the day under bark and in soil litter, and emerge at night to feed.



Insect Pest: Grape Berry Moth

Description: Eggs are found in clusters, have a shiny exterior, and are very small (1/32" diameter). The adult is a mottled brown moth, 1/4" in length. The hind portion of the wings is gray-blue with brown markings, while the front portion is gray-blue and without markings.

When to Look: Late May

Where to Look: Bud, stems, and young berry clusters.

What to Look For: Eggs.

Sampling: Presence of eggs and their location on the plant.

Notes: Pheromone traps will detect early presence of moths.



Insect Pest: Grape Flea Beetle

Description: Beetles are shiny, metallic dark blue and 3/16" long.

When to Look: Late April until buds have grown to a length of 1/2" or more.

Where to Look: Buds and canes.

What to Look For: Feeding on young buds. Buds are chewed on the sides and ends, and hollowed out. Adult beetles.

Sampling: Monitor vineyard border adjacent to woods or protected areas and in center of the vineyard. Inspect vines at four locations and record percent of bud damage.



10" Shoot: Shoots are close to 10" long. Flower clusters are clearly visible.

Insect Pest: Apple Twig Borer

Description: Beetles are brown to black in color, cylindrical shaped, and 3/8" long.

When to Look: 3-6" shoot growth.

Where to Look: Canes.

What to Look For: Beetles.

Sampling: Estimate number of beetles per vine.

Insect Pest: Grape Flea Beetle

Description: Beetles are shiny, metallic dark blue and 3/16" long. Young larvae are dark brown, 1/16", but lighten as they grown, eventually reaching 1/3".

When to Look: Early shoot growth through bloom.

Where to Look: Leaves.

What to Look For: Feeding on upper and lower leaf surfaces. Adults and larvae.

Sampling: Monitor vineyard border adjacent to woods or protected areas and in center of the vineyard. Inspect vines at four locations and record percent of leaf damage. Note any presence of adults or larvae.



University of Nebraska

Insect Pest: Grape Phylloxera

Description: Wingless forms are tiny, yellow-brown, and aphid-like.

When to Look: Beginning when shoot length reaches five inches and throughout summer.

Where to Look: Underside of leaves.

What to Look For: Galls on undersides of leaves. Galls are green with rough looking surface and are about 1/4" in diameter.

Sampling: Estimate percent of foliage per vine with galls. Rate gall damage as heavy, moderate, or light.



University of Nebraska

Insect Pest: Rose Chafer

Description: Light tan beetle with a darker brown head and long legs, about 1/2" long.

When to Look: Late May near bloom time until harvest.

Where to Look: Leaves and developing berries.

What to Look For: Adult beetles and damaged young fruit clusters.

Sampling: Estimate number of beetles per vine.



Michigan State

Insect Pest: Spider Mites

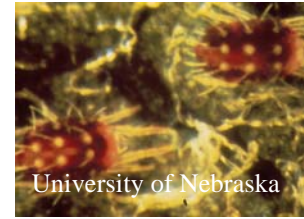
Description: Adults range from dark red/reddish-brown (European Red mite) to dull green/brown (two-spotted spider mite). They have eight legs and are 1/50" long. Eggs are globe-shaped and very tiny.

When to Look: Early in growing season from early shoot growth (1-4") to 20 days post-bloom.

Where to Look: Underside of leaves.

What to Look For: Clusters of mites within fine webbing. Stunted, chlorotic shoots with small leaves and characteristic pinpoint necrotic area (stippling) on leaves.

Sampling: Estimate number of mites on average of ten leaves.



Pre-Bloom: First flowers are ready to open.

Insect Pest: Grape Berry Moth

Description: Larvae are 2/5" when fully grown. They are pale olive-green with a purplish tinge, but can vary in color depending on their food source.

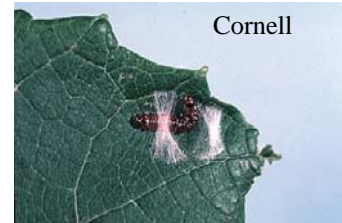
When to Look: Early stages of berry development through veraison.

Where to Look: Blossoms and young grape clusters.

What to Look For: Webbed berry clusters and emerging larvae.

Sampling: Inspect 10 clusters per vine on a total of 5 vines at both interior and edge sites. Record number of webs within berry clusters to estimate number of larvae.

Notes: Pheromone traps will detect early presence of moths.



Insect Pest: Grape Flea Beetle

Description: Beetles are shiny, metallic dark blue and 3/16" long. Young larvae are dark brown, 1/16", but lighten as they grown, eventually reaching 1/3".

When to Look: Early shoot growth through bloom.

Where to Look: Leaves.

What to Look For: Feeding on upper and lower leaf surfaces. Adults and larvae.

Sampling: Monitor vineyard border adjacent to woods or protected areas and in center of the vineyard. Inspect vines at four locations and record percent of leaf damage. Note any presence of adults or larvae.



Insect Pest: Grape Phylloxera

Description: Wingless forms are tiny, yellow-brown, and aphid-like.

When to Look: Beginning when shoot length reaches five inches and throughout summer.

Where to Look: Underside of leaves.

What to Look For: Galls on undersides of leaves. Galls are green with rough looking surface and are about 1/4" in diameter.

Sampling: Estimate percent of foliage per vine with galls. Rate gall damage as heavy, moderate, or light.

Insect Pest: Rose Chafer

Description: Light tan beetle with a darker brown head and long legs, about 1/2" long.

When to Look: Late May near bloom time until harvest.

Where to Look: Leaves and developing berries.

What to Look For: Adult beetles and damaged young fruit clusters.

Sampling: Estimate number of beetles per vine.



Insect Pest: Spider Mites

Description: Adults range from dark red/reddish-brown (European Red mite) to dull

green/brown (two-spotted spider mite). They have eight legs and are 1/50" long. Eggs are globe-shaped and very tiny.

When to Look: Early in growing season from early shoot growth (1-4") to 20 days post-bloom.

Where to Look: Underside of leaves.

What to Look For: Clusters of mites within fine webbing. Stunted, chlorotic shoots with small leaves and characteristic pinpoint necrotic area (stippling) on leaves.

Sampling: Estimate number of mites on average of ten leaves.

Bloom: Most of the flowers are open.

Insect Pest: Grape Berry Moth

Description: Larvae are 2/5" when fully grown. They are pale olive-green with a purplish tinge, but can vary in color depending on their food source.

When to Look: Early stages of berry development through veraison.

Where to Look: Blossoms and young grape clusters.

What to Look For: Webbed berry clusters and emerging larvae.

Sampling: Inspect 10 clusters per vine on a total of 5 vines at both interior and edge sites. Record number of webs within berry clusters to estimate number of larvae.

Notes: Pheromone traps will detect early presence of moths.



Insect Pest: Grape Phylloxera

Description: Wingless forms are tiny, yellow-brown, and aphid-like.

When to Look: Beginning when shoot length reaches five inches and throughout summer.

Where to Look: Underside of leaves.

What to Look For: Galls on undersides of leaves. Galls are green with rough looking surface and are about 1/4" in diameter.

Sampling: Estimate percent of foliage per vine with galls. Rate gall damage as heavy, moderate, or light.

Insect Pest: Redbanded Leafroller

Description: Larvae are yellowish-green with a green head capsule and reach a length of 7/10".

When to Look: Bloom through harvest.

Where to Look: Foliage and berry clusters.

What to Look For: Webbing in and around grape clusters during early berry formation. Leaves that are folded or rolled up together with webbing. Larvae are within webbings.

Sampling: Count average number of berry clusters per vine with webbing. Rate webbing damage on leaves and berry clusters as heavy, moderate or light.



Insect Pest: Rose Chafer

Description: Light tan beetle with a darker brown head and long legs, about 1/2" long.

When to Look: Late May near bloom time until harvest.

Where to Look: Leaves and developing berries.

What to Look For: Adult beetles and damaged young fruit clusters.

Sampling: Estimate number of beetles per vine.

Insect Pest: Spider Mites

Description: Adults range from dark red/reddish-brown (European Red mite) to dull green/brown (two-spotted spider mite). They have eight legs and are 1/50" long. Eggs are

globe-shaped and very tiny.

When to Look: Early in growing season from early shoot growth (1-4") to 20 days post-bloom.

Where to Look: Underside of leaves.

What to Look For: Clusters of mites within fine webbing. Stunted, chlorotic shoots with small leaves and characteristic pinpoint necrotic area (stippling) on leaves.

Sampling: Estimate number of mites on average of ten leaves.

Shatter: Ten to fourteen days after bloom in early stages of berry development.

Insect Pest: Eastern Grape Leafhopper

Description: Adults are 1/8" and pale yellow with three black spots and zig-zag lines of deeper yellow on the forewings. Young nymphs are semi-transparent with red eyes, but darken with each molt.

When to Look: Early July through October.

Where to Look: Underside of grape leaves.

What to Look For: Nymphs and adults. Damaged leaves that are mottled with yellow dots. Excrement and honeydew secreted by leafhoppers drops on berries.

Sampling: On one shoot per vine, inspect 5 leaves starting at the 3rd leaf from the base. Record number of "damaged" leaves on each shoot.



Insect Pest: Grape Berry Moth

Description: Larvae are 2/5" when fully grown. They are pale olive-green with a purplish tinge, but can vary in color depending on their food source.

When to Look: Early stages of berry development through veraison.

Where to Look: Blossoms and young grape clusters. Berries.

What to Look For: Webbed berry clusters and emerging larvae. Entry sites visible as small holes in berries.

Sampling: Inspect 10 clusters per vine on a total of 5 vines at both interior and edge sites. Record number of webs within berry clusters to estimate number of larvae.

Notes: Pheromone traps will detect early presence of moths.



Insect Pest: Grape Mealybug

Description: Adults are soft, oval, covered with a waxy layer that extends into spines along the body margin, 1/8" long.

When to Look: June to late summer.

Where to Look: In crevices of foliage and at point where berries meet the rachis.

What to Look For: Honeydew on foliage, twigs, and fruit that is produced by feeding insects. Sooty mold can grow on honeydew and spoil fruit. Adults.

Sampling: Estimate number of adults per vine.



Insect Pest: Grape Rootworm Beetle

Description: Beetle is oval, light brown with short pubescence, 1/4" long.

When to Look: Mid- to late May, beginning about two weeks after grape bloom.

Where to Look: Around bloom and young berry clusters, and on leaves.

What to Look For: Chain-like feeding marks on upper leaf surfaces by adults.

Sampling: Approximate average percent damage of foliage. If beetles are seen, count average number of beetles per vine.

Insect Pest: Redbanded Leafroller

Description: Larvae are yellowish-green with a green head capsule and reach a length of 7/10".

When to Look: Bloom through harvest.

Where to Look: Foliage and berry clusters.

What to Look For: Webbing in and around grape clusters during early berry formation. Leaves that are folded or rolled up together with webbing. Larvae are within webbings.

Sampling: Count average number of berry clusters per vine with webbing. Rate webbing damage on leaves and berry clusters as heavy, moderate or light.

**Insect Pest: Rose Chafer**

Description: Light tan beetle with a darker brown head and long legs, about 1/2" long.

When to Look: Late May near bloom time until harvest.

Where to Look: Leaves and developing berries.

What to Look For: Adult beetles and damaged young fruit clusters.

Sampling: Estimate number of beetles per vine.

Insect Pest: Spider Mites

Description: Adults range from dark red/reddish-brown (European Red mite) to dull green/brown (two-spotted spider mite). They have eight legs and are 1/50" long. Eggs are globe-shaped and very tiny.

When to Look: Early in growing season from early shoot growth (1-4") to 20 days post-bloom.

Where to Look: Underside of leaves.

What to Look For: Clusters of mites within fine webbing. Stunted, chlorotic shoots with small leaves and characteristic pinpoint necrotic area (stippling) on leaves.

Sampling: Estimate number of mites on average of ten leaves.

1st Cover to Veraison: Berries begin to touch and it becomes impossible to protect the interior of the berry bunch from pests and diseases. Berries soften and change color as they begin to ripen.

Insect Pest: Eastern Grape Leafhopper

Description: Adults are 1/8" and pale yellow with three black spots and zig-zag lines of deeper yellow on the forewings. Young nymphs are semi-transparent with red eyes, but darken with each molt.

When to Look: Early July through October.

Where to Look: Underside of grape leaves.

What to Look For: Nymphs and adults. Damaged leaves that are mottled with yellow dots. Excrement and honeydew secreted by leafhoppers drops on berries.

Sampling: On one shoot per vine, inspect 5 leaves starting at the 3rd leaf from the base. Record number of "damaged" leaves on each shoot.



Insect Pest: Grape Berry Moth

Description: Larvae are 2/5" when fully grown. They are pale olive-green with a purplish tinge, but can vary in color depending on their food source.

When to Look: Early stages of berry development through veraison.

Where to Look: Blossoms and young grape clusters. Berries.

What to Look For: Webbed berry clusters and emerging larvae. Entry sites visible as small holes in berries.

Sampling: Inspect 10 clusters per vine on a total of 5 vines at both interior and edge sites. Record number of webs within berry clusters to estimate number of larvae.

Notes: Pheromone traps will detect early presence of moths.

Insect Pest: Grape Mealybug

Description: Adults are soft, oval, covered with a waxy layer that extends into spines along the body margin, 1/8" long.

When to Look: June to late summer.

Where to Look: In crevices of foliage and at point where berries meet the rachis.

What to Look For: Honeydew on foliage, twigs, and fruit that is produced by feeding insects. Sooty mold can grow on honeydew and spoil fruit. Adults.

Sampling: Estimate number of adults per vine.

Insect Pest: Grape Rootworm Beetle

Description: Beetle is oval, light brown with short pubescence, 1/4" long.

When to Look: Mid- to late May, beginning about two weeks after grape bloom.

Where to Look: Around bloom and young berry clusters, and on leaves.

What to Look For: Chain-like feeding marks on upper leaf surfaces by adults.

Sampling: Approximate average percent damage of foliage. If beetles are seen, count average number of beetles per vine.

Insect Pest: Grasshoppers

Description: Nymphs are wingless, but resemble adults. Adults are 1" - 1 ½" long and vary in color from yellowish-green to reddish-brown.

When to Look: Late June to harvest.

Where to Look: Leaves and fruit.

What to Look For: Nymphs and adults. Leaf damage and defoliation.

Sampling: Use the square yard method to determine grasshopper density. Visualize a one-square yard area on a vineyard border. As you walk toward the area count the number of grasshoppers jumping in or out of the area in several locations around the vineyard. This will help you estimate the average number of grasshoppers per square yard.



Insect Pest: Japanese Beetle

Description: Beetles are metallic green with copper brown fore wings. A row of white hair tufts line each side of the abdomen.

When to Look: Early July through harvest.

Where to Look: Upper leaf surface and berry clusters.

What to Look For: Foliage that has a lacelike skeletonized appearance.

Sampling: Approximate average percent damage of foliage. If beetles are present, count average number of beetles per vine.

Notes: Japanese beetles are just beginning to enter Nebraska and will not likely be found west of Grand Island at this time.



Insect Pest: Redbanded Leafroller

Description: Larvae are yellowish-green with a green head capsule and reach a length of 7/10".

When to Look: Bloom through harvest.

Where to Look: Foliage and berry clusters.

What to Look For: Webbing in and around grape clusters during early berry formation. Leaves that are folded or rolled up together with webbing. Larvae are within webbings.

Sampling: Count average number of berry clusters per vine with webbing. Rate webbing damage on leaves and berry clusters as heavy, moderate or light.

Insect Pest: Rose Chafer

Description: Light tan beetle with a darker brown head and long legs, about ½" long.

When to Look: Late May near bloom time until harvest.

Where to Look: Leaves and developing berries.

What to Look For: Adult beetles and damaged young fruit clusters.

Sampling: Estimate number of beetles per vine.

Insect Pest: Sphinx hornworm caterpillar

Description: Caterpillar is bright green when young, but darkens to a reddish brown as it matures. It has large, white spots along the sides of the body and is 3" long when fully grown. It has a distinctive "horn" at the hind end.

When to Look: Late June through August.

Where to Look: Leaves



What to Look For: Caterpillars and damaged leaves/defoliation of vines.

Sampling: Record number of caterpillars per vine on 3-4 vines.

Insect Pest: Spider Mites

Description: Adults range from dark red/reddish-brown (European Red mite) to dull green/brown (two-spotted spider mite). They have eight legs and are 1/50" long. Eggs are globe-shaped and very tiny.

When to Look: Early in growing season from early shoot growth (1-4") to 20 days post-bloom.

Where to Look: Underside of leaves.

What to Look For: Clusters of mites within fine webbing. Stunted, chlorotic shoots with small leaves and characteristic pinpoint necrotic area (stippling) on leaves.

Sampling: Estimate number of mites on average of ten leaves.

Veraison to Harvest: Berries are soft and ripe colored as sugar content and berry size increase. Clusters are ready for harvest.

Insect Pest: Eastern Grape Leafhopper

Description: Adults are 1/8" and pale yellow with three black spots and zig-zag lines of deeper yellow on the forewings. Young nymphs are semi-transparent with red eyes, but darken with each molt.

When to Look: Early July through October.

Where to Look: Underside of grape leaves.

What to Look For: Nymphs and adults. Damaged leaves that are mottled with yellow dots. Excrement and honeydew secreted by leafhoppers drops on berries.

Sampling: On one shoot per vine, inspect 5 leaves starting at the 3rd leaf from the base. Record number of "damaged" leaves on each shoot.



Insect Pest: Grape Berry Moth

Description: Larvae are 2/5" when fully grown. They are pale olive-green with a purplish tinge, but can vary in color depending on their food source.

When to Look: Early stages of berry development through veraison.

Where to Look: Blossoms and young grape clusters. Berries.

What to Look For: Webbed berry clusters and emerging larvae. Entry sites visible as small holes in berries.

Sampling: Inspect 10 clusters per vine on a total of 5 vines at both interior and edge sites. Record number of webs within berry clusters to estimate number of larvae.

Notes: Pheromone traps will detect early presence of moths.

Insect Pest: Grape Root Borer

Description: Adults are day flying clearwing moths with a dark brown body and yellow-orange bands on the abdomen.

When to Look: July during daytime.

Where to Look: Base of vines out to a distance of 18 inches. Injury is most severe in low, poorly drained areas of the vineyard.

What to Look For: Empty pupal skins. Moths emerge in late summer.

Sampling: Estimate number of pupal skins per vine and record presence of day flying moths.



Michigan State

Insect Pest: Grape Rootworm Beetle

Description: Beetle is oval, light brown with short pubescence, 1/4" long.

When to Look: Mid- to late May, beginning about two weeks after grape bloom.

Where to Look: Around bloom and young berry clusters, and on leaves.

What to Look For: Chain-like feeding marks on upper leaf surfaces by adults.

Sampling: Approximate average percent damage of foliage. If beetles are seen, count average number of beetles per vine.

Insect Pest: Grasshoppers

Description: Nymphs are wingless, but resemble adults. Adults are 1" - 1 ½" long and vary in color from yellowish-green to reddish-brown.

When to Look: Late June to harvest.

Where to Look: Leaves

What to Look For: Nymphs and adults. Leaf damage and defoliation.

Sampling: Use the square yard method to determine grasshopper density. Visualize a one-square yard area on a vineyard border. As you walk toward the area count the number of grasshoppers jumping in or out of the area in several locations around the vineyard. This will help you estimate the average number of grasshoppers per square yard.

Insect Pest: Japanese Beetle

Description: Beetles are metallic green with copper brown fore wings. A row of white hair tufts line each side of the abdomen.

When to Look: Early July through harvest during clear days.

Where to Look: Upper leaf surface and berry clusters.

What to Look For: Foliage that has a lacelike skeleton appearance.

Sampling: Approximate average percent damage of foliage. If beetles are seen, count average number of beetles per vine.

Notes: Japanese beetles are just beginning to enter Nebraska and will not likely be found west of Grand Island at this time.

Insect Pest: Redbanded Leafroller

Description: Larvae are yellowish-green with a green head capsule and reach a length of 7/10".

When to Look: Bloom through harvest.

Where to Look: Foliage and berry clusters.

What to Look For: Webbing in and around grape clusters during early berry formation. Leaves that are folded or rolled up together with webbing. Larvae are within webbings.

Sampling: Count average number of berry clusters per vine with webbing. Rate webbing damage on leaves and berry clusters as heavy, moderate or light.



Insect Pest: Rose Chafer

Description: Light tan beetle with a darker brown head and long legs, about ½" long.

When to Look: Late May near bloom time until harvest.

Where to Look: Leaves and developing berries.

What to Look For: Adult beetles and damaged young fruit clusters.

Records: Estimate number of beetles per vine.

Insect Pest: Sphinx hornworm caterpillar

Description: Caterpillar is bright green when young, but darkens to a reddish brown as it matures. It has large, white spots along the sides of the body and is 3" long when fully grown. It has a distinctive "horn" at the hind end.

When to Look: Late June through August.

Where to Look: Leaves

What to Look For: Caterpillars and damaged leaves/defoliation of vines.

Sampling: Record number of caterpillars per vine on 3-4 vines.

Post-Harvest: Grapes have been harvested and early stages of defoliation begins, primarily of basal leaves.

Insect Pest: Asian Ladybeetle

Description: Beetles are red to yellow-orange in color with varying numbers of dark spots. They can be distinguished from other ladybeetles by the black “M” or “W” on the body between the head and abdomen.

When to Look: Late season at harvest.

Where to Look: Ripening grapes.

What to Look For: Punctured berries.

Sampling: Approximate number of beetles per berry cluster.

Notes: Could cause contamination to juice when crushed with grapes.

Late ripening cultivars of grapes often have higher numbers of beetles. Harvest grapes later in the day and vigorously shake active beetles from vines. Consider using products with repellent activity.



Insect Pest: Bees and Wasps

When to Look: Late season at harvest.

Where to Look: Ripening grapes.

What to Look For: Adult bees and wasps on berry clusters. Broken skin on berries.

Sampling: Estimate percent of grape clusters with bees and wasps.

Notes: Sanitation is the best way to reduce bee and wasp problems. Ripe fruit and any fruit



Insect Pest: Grasshoppers

Description: Nymphs are wingless, but resemble adults. Adults are 1" - 1 ½" long and vary in color from yellowish-green to reddish-brown.

When to Look: Late June to harvest.

Where to Look: Leaves

What to Look For: Nymphs and adults. Leaf damage and defoliation.

Sampling: Use the square yard method to determine grasshopper density. Visualize a one-square yard area on a vineyard border. As you walk toward the area count the number of grasshoppers jumping in or out of the area in several locations around the vineyard. This will help you estimate the average number of grasshoppers per square yard.