Vineyard Pest Management

Insect, Weed, and Vertebrate Pest Management for New Vineyards

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Vineyard Pest Management

IPM/SVP/ICM Program Components
A “Whole Plant Health Care Plan”

- **Cultural Practices**
  - site selection
  - site preparation
  - soil management
  - cultivar selection
  - cultural practices
    - canopy management
    - nutrition
- **Disease/Insect Management**
  - monitoring/trapping
  - forecasting
  - control choices
    - pesticides/mating disruption
- **Weed Management**
  - cultivation
  - cover crops
- **Other Pests - vertebrates**
  - birds, deer, raccoons
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“The most important thing you can put into the vineyard is your footprints!”
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Proximity to Woods

Increased pressure from:
- Wildlife
  - habitat
- Insects
  - wild vines
- Diseases
  - reduced air movement
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Grape Berry Moth
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Grape Root Borer
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Japanese Beetles
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- Native to China, Japan, Korea, and Taiwan.
- Broad host range including many important agricultural crops such as tree fruit, small fruit, legumes, vegetables, and ornamentals.
- Typically 2 generations per year (up to six)
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Spotted Winged Drosophila

by Alex Surcica

Photos by G. Arakelian

Martha Hinter, CIPR

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Solutions in your Community
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Other Insects

Grape Leafhopper

MgL

Multicolored Asian Lady Beetles

Grape phylloxera
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Protect Beneficial Insects

Lady Beetles
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Vineyard Weed Management

Mange weeds BEFORE You plant!
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Vineyard Floor Management Options

• Under the Row
  – Herbicide strip
  – Mechanical weed management
  – Ground Cover
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Vineyard Weed Management
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Under the row management: Herbicide Strip

- **Advantages**
  - Minimal competition
  - Minimal impact on soil structure
  - Low labor
  - Aesthetics

- **Drawbacks**
  - Expense
  - Low labor
  - Hunting season
  - Short and long term effect on vines?
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Vineyard Weed Management

Be extremely careful!

Glyphosate – 2 years later!

2,4-D!
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Under the row management: Mechanical Weed Control

Advantages
• Minimal competition
• No long term effect on vines
• “Hilling-up”

Drawbacks
• Impact on soil structure
• Labor/frequency
• Equipment
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Mechanical Weed Mgmt.
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Mechanical Weed Mgmt.
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Under the row management: Ground Cover

Advantages
• Benficial competition
  – Water
  – Nutrients
• No long term effect on vines
• Erosion control

Drawbacks
• Establishment
• Mainteneance
  – Labor
• Equipment
• Early competition
  – Establish year 2 or 3
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Ground Cover
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Birds

'BirdX'

GULLS
REPEL stubborn gulls from off-shore oil platforms, helipads, landfills, marinas and beaches.

PIGEONS
SCARE pesky pigeons from rooftops, open parking lots and parks.

GEASE
BANISH territorial geese and ducks from lakefronts, golf courses and corporate parks.

STALINGS
CHASE starlings from airfields, orchards, vineyards and trees.
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Bird Netting

Fruit-zone netting
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Raccoons and others
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Deer
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Dogs

Pairs of dogs can protect 20-30 acres. Hyperactive dogs that would normally be destroyed are sources from animal shelters.
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Deer Fencing
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Deer Fencing

Fig. 11: The deerproof wire construction shown.

Fig. 5: The wire is set on wood posts.
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Deer Fencing
The “Ultimate” Exclusion Deer Fence
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