Bird Management in Vineyards

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Good day for starlings, bad day for bird control
Birds and Grape Growers

• Most grape growers love birds 11 months each year
• Growers can manage birds!
• Bird management is not a passive activity.
• Growers cannot hope that birds will go away or will not damage their crop
• Birds impact quantity and quality of fruit
• Birds and late season fruit rots may be the biggest threats to quality and profits
Why are Birds a Problem?

• They eat your crop

• But even worse, they inflict damage to the skin, leading to the spread of fruit rot diseases (sour, bitter, ripe rots, botrytis)

• Rot volatile aromas and sugar attract yellow jackets, ants, MALB, SWD and other fruit flies, etc.

• Fruit compromised by bird damage can have a negative impact on wine quality

• They cost the grower a lot of money and frustration
Some Questions about Birds

• Why is one year worse or better than another
• Why some vineyards have problems and other do not
• Are birds getting smarter? Adaptive behavior.
• Is the problem getting worse?
• What will be the impact of climate change on, for example, migratory patterns?
• What level of protection does the vineyard require?
• Does killing birds deter other birds?
• Are cloudy and-or rainy days worse than sunny ones?
• Are warm vintages worse than wet, late and cool ones?
Options

• Do nothing

• Active measures
  – Remove nesting and roosting areas
  – Bird patrols: takes time and energy but still effective, wear bright colors
  – Pyrotechnics – bombs and whistlers
  – Whistles: Thunderer is the Cadillac of whistles

• Passive
  – Site selection: no trees, open fields
  – Noise makers: propane canons, electronic scare devices
  – Nets: still the best option for full protection
  – Electric fence
  – Traps
  – Tape, balloons, kites, etc.
  – Trap crops

• Chemical bird deterrents: Rejex-it
Canons

- Zon is the standard
- Reed-Joseph Scareaway is the Cadillac
- Rotating tripod model is the best
- Auto on/off: photocell or electronic on/off
- Set firing rate according to level of bird pressure
- Use physical features (buildings, hills, etc.) for max effect
- Placement: top of hill, middle or edge
- Canopies absorb sound
How to Protect a Vineyard

• Bird management is preventative: control measures must be in place BEFORE birds arrive

• Movement: avoid any patterns
  – Move devices around the vineyard constantly
  – Movement in the vineyard – patrolling, dogs, tractors, etc.
  – Move the birds – herding method, away and out of the vineyard

• Know the hot spots and entry points: set up defensive perimeter. Focus on outside rows.

• Know your enemy: robins, starlings, wax wings, flickers, turkeys, etc. Are they a protected species? How do they feed and what varieties do they prefer?
Netting Trial on Long Island: Type & Treatments

  – Types of net – Standard Net, fine mesh (Conwed), Ulstrawind®, Gintec, Gintec fine mesh, Windbreak Plus®, Multivine, Vineside®, Vineside EZ10®, Vinenet®, Permanet®
  – Treatments – net type, grape variety, time of application & spacers

- Alice Wise and Libby Tarleton, Cornell Cooperative Extension
Standard Net: ¾” extruded plastic

Vineside EZ10 15mm diamond mesh, knitted

Gintec ProGard 4-7mm

Vinenet 16mm diamond mesh, over row

Windbreak Plus 3mm

- Alice Wise and Libby Tarleton, Cornell Cooperative Extension
Summary of Bird Netting Trials

Ulstrawind, Windbreak Plus, Gintec fine mesh and Permanet all provided good protection in both replicated and observational plots.

- Birds learn – will they eventually figure out these fine mesh nets?
- Considerable expense
- No ripening concerns thus far

LIHREC – std. net vs. Windbreak Plus

- Alice Wise and Libby Tarleton, Cornell Cooperative Extension
2005 – Net Spacers

- Alice Wise and Libby Tarleton, Cornell Cooperative Extension
A Typical Day of Bird Defense

- **Preparation**: shotgun, ammo, whistle, hearing protection, tools to repair canons, other? Wear bright colors.
- **Dawn + 3 hrs**: intensive bird patrol with shotguns and pyrotechnic devices. Unless on photocell, turn on guns and alarms. ATVs and mules are ideal for this work. One vehicle per 25 acres.
- **Afternoon lull**: move devices to new locations. Check propane levels (feel the weight of tank). Service any broken devices. Reload. Service shotguns and other tools.
- **3 hours prior to dusk**: resume intensive bird patrols. At dusk make sure all noise makers are turned off. Gas up ATV. Go home and recover.
Economics of Bird Defense

• Netting (material and labor)
• Noise devices (equipment and fuel/power)
• Guns and ammo (shells, bombs, whistlers, etc.)
• Vehicles, fuel
• Labor
• Fruit loss – crop reduction, disease (can you afford not to do it). Think in terms of grape and wine value.
Safety

- Firearm safety and training
- Hearing loss
- All terrain vehicle safety and training
- Birds and their diseases
- Permit for use of pyrotechnics, shotguns
Neighbors

• The “always one” principle of neighbors
• The key: education, communication and courtesy – take the initiative. Start each vintage with a letter.
• Know your rights! Start with the zoning designation of your property.
• Is there an agriculture commission in your county?
• Pennsylvania ACRE program
• CAWG booklet
Knowing When to Give Up and Pick!

• A point will be reached when all control measures fail
• Know what the maturity and quality standards are for each winery
• The wine maker should be in the vineyard looking at damage: loss of fruit, and disease
• Acreage contracts may buffer the grower against yield loss for additional hang time
Information Resources

• Ontario studies of propane canon use, and bird control
• *Outsmarting the Birds*. Michael Trunko and Susan Parrish
• Local Fish and Wildlife service
• Netting Trials by Alice Wise and Libby Tarleton, Cornell Cooperative Extension
• *The Winegrape Guidebook to Establishing Good Neighbor and Community Relations*. CAWG
• Sutton Ag Enterprises for anti-bird equipment and supplies - [http://www.suttonag.com/index.html](http://www.suttonag.com/index.html)
Questions?

http://pawinegrape.com/