

Insect, Weed, and Vertebrate Pest Management for New Vineyards

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A vertical arrangement of a bunch of blue grapes hanging from a vine at the top, with a glass of red wine at the bottom. The grapes are dark blue and glistening. The background is dark with a vertical purple gradient.

You need grapes to make money!!!!

“The Wine is made in the Vineyard”
“You need great grapes to make a great wine”

Benefit - Cost Analysis

Compare

- Potential loss
(vinifera grapes
@\$1400/T)
against
- Control cost
 - Specific pest



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, racoons



A SUSTAINABLE PRACTICES WORKBOOK FOR WINE GRAPE GROWING IN MARYLAND



“The most important thing you can put into the vineyard is your footprints!”



Proximity to Woods



Increased
pressure from:
Wildlife

- habitat

Insects

- wild vines

Diseases

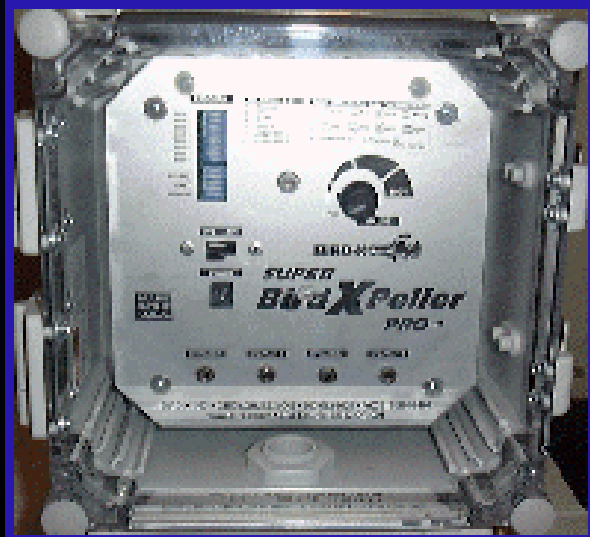
- reduced air
movement

Birds

**Migratory
or
Local**



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.



GEESE

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

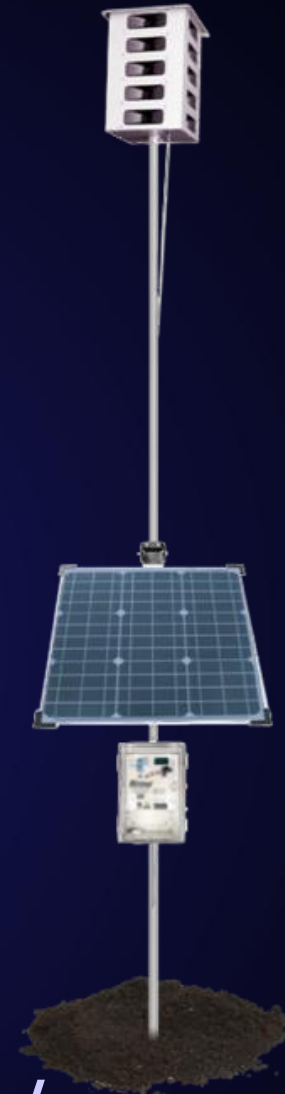


STARLINGS

CHASE starlings from airfields, orchards, vineyards and trees.



Vineyard Pest Management



<https://www.birdgard.com/>
Crop loss calculator

Bird Netting



Fruit-zone netting



Deer





Photo by Gary
San Julian

Large deer herds are common

Managing **Deer**

Damage in Maryland

Bulletin 354



This presentation follows the information provided in this publication. It is available from UM Extension for \$2

Decision Considerations for Applying Wildlife Damage Management for Deer

- **Lethal Options**

- ▶ **Population Management**

- Traditional hunting
 - Managed hunts or sharpshooters
 - Deer contraception not a viable option



- **Non-lethal Options**

- ▶ **Vegetation Management**

- ▶ **Repellents**

- ▶ **Scare devices**

- ▶ **Dogs**

- ▶ **Fencing**





Recreational hunters can be used to control deer populations in rural and suburban areas.

Crop Damage Permits

- MD DNR Wildlife Division can issue crop damage permits to commercial growers of agricultural and tree crops.
- The biologist must see the damage to issue permits (usually for doe deer).
- The deer can be taken out of season or in season. You can give permission to others to use the permits.



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- ▶ **Repellents**

- ▶ **Scare devices**

- ▶ **Dogs**

- ▶ **Fencing**



Things to Know About Using Repellents...

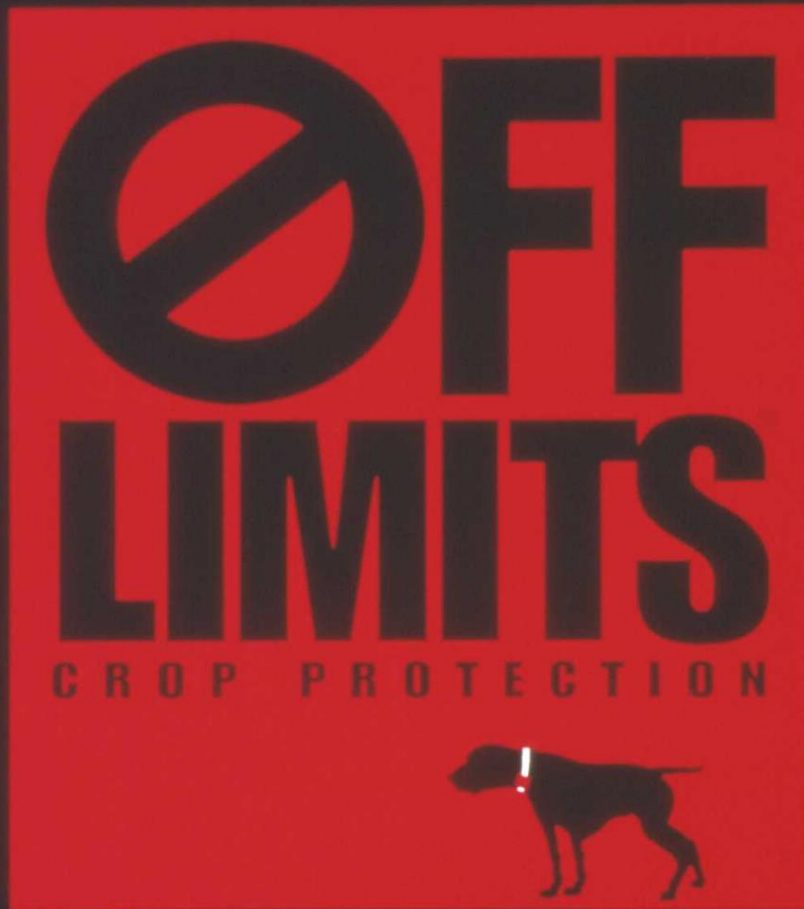
- They have a limited life and will will fail
 - Longevity is usually from 7 to 13 weeks.
- They work by odor, taste or a combination.
Generally, odor-based > taste-based.
- Deer have seasonal feeding patterns
 - For winter damage apply before deer start feeding
- Effectiveness varies by that works in one area may not work in another, according to pressure.
- Need to change repellent types annually
- Success depends on availability of other foods.
 - During the winter, foods scarce, not as effective.
- Deer will continue to be a long-term problem.



Wildlife Management in Vineyards

Critter Blaster - Pro





Dogs contained by buried electric fencing!



Dogs



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

Western Maryland Research & Education Center Dog Fence Study

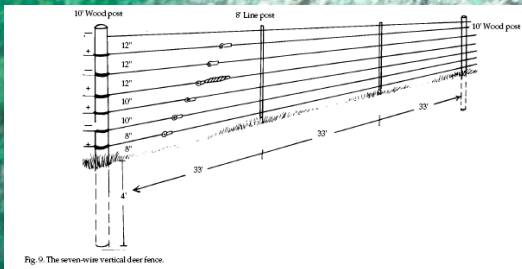
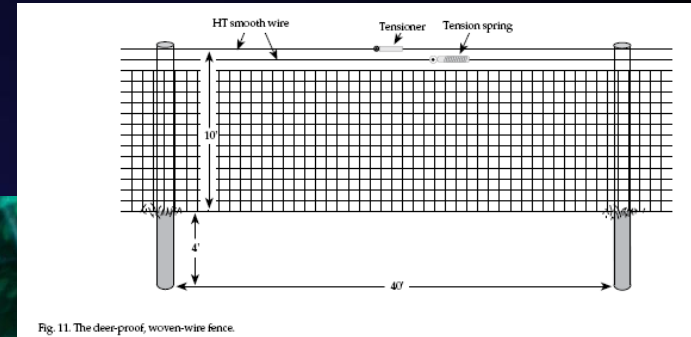
- 100% survival for protected trees and 0% for unprotected trees.



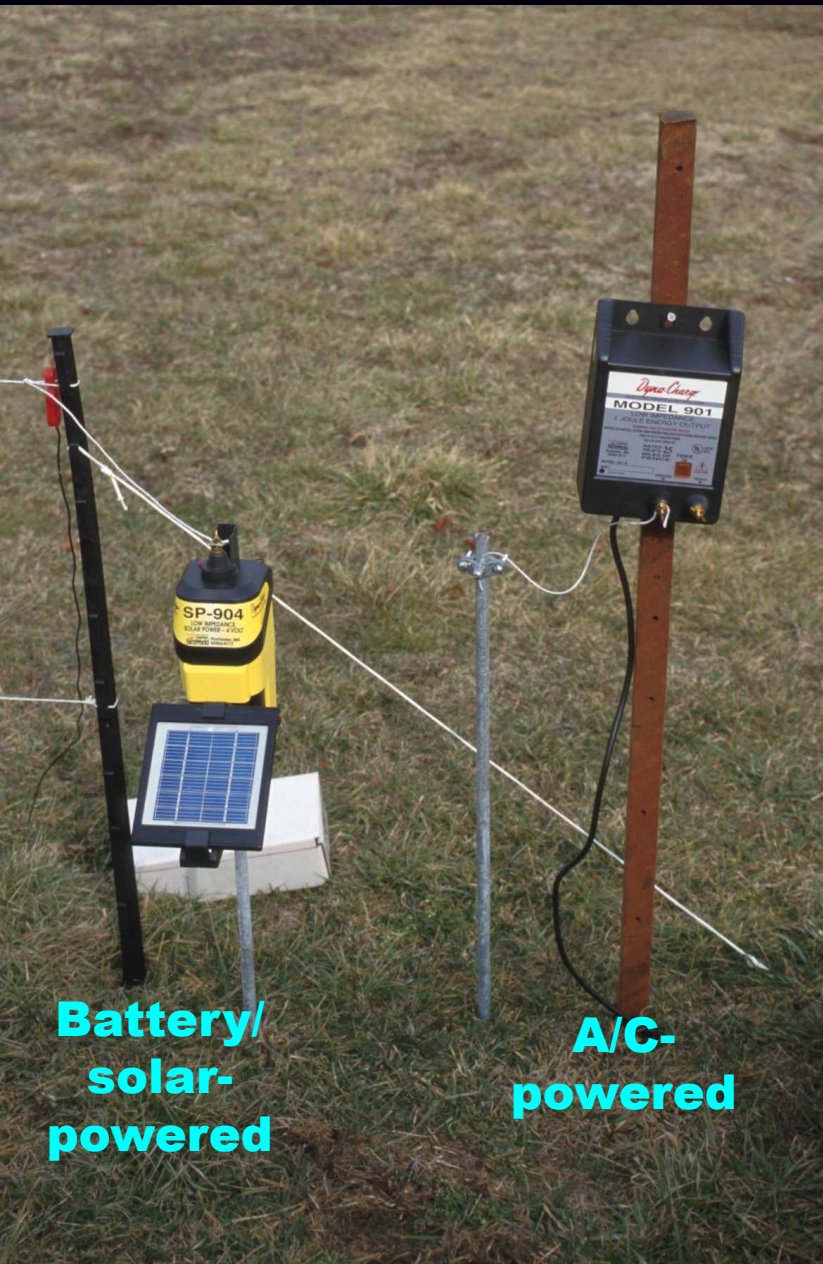
- Within first year dogs killed approximately 45 groundhogs, 17 raccoons and countless voles.
- Dogs did escape a few times which required a more powerful collar.



Deer Fencing



Electric chargers



Battery/
solar-
powered

A/C-
powered

- High voltage, low impedance
- Small computers with 45-65 pulses/min
- Duration - 0.003 per second
- AC, DC, battery, solar powered units available
- Always use AC power if possible.





**Achilles' Heel of
polywire fences...**

...snow



**Two-strand fence protects
young fruit trees**





High-Tensile Fencing

- Engineered
- Wire under high tension
- Requires professionals
- Costly





Photo by Jack Olive





Deer Fencing





A SUSTAINABLE PRACTICES WORKBOOK FOR WINE GRAPE GROWING IN MARYLAND





Web Resources

- [*https://extension.umd.edu/resource/managing-deer-damage-maryland-eb-354*](https://extension.umd.edu/resource/managing-deer-damage-maryland-eb-354)
 - University of Maryland online resources
- [*https://grapes.extension.org/late-season-bird-and-deer-control-in-vineyards/*](https://grapes.extension.org/late-season-bird-and-deer-control-in-vineyards/)
 - PSU resources
- [*https://thegrapevinemagazine.net/2000/02/wildlife-control-in-the-vineyard/*](https://thegrapevinemagazine.net/2000/02/wildlife-control-in-the-vineyard/)



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