



Dealing with Deer Impacts and Crop Damage in New York

Collaborative Deer Management Outreach Initiative



Cornell University
Department of Natural Resources
Human Dimensions Research Unit



**Department of
Environmental
Conservation**

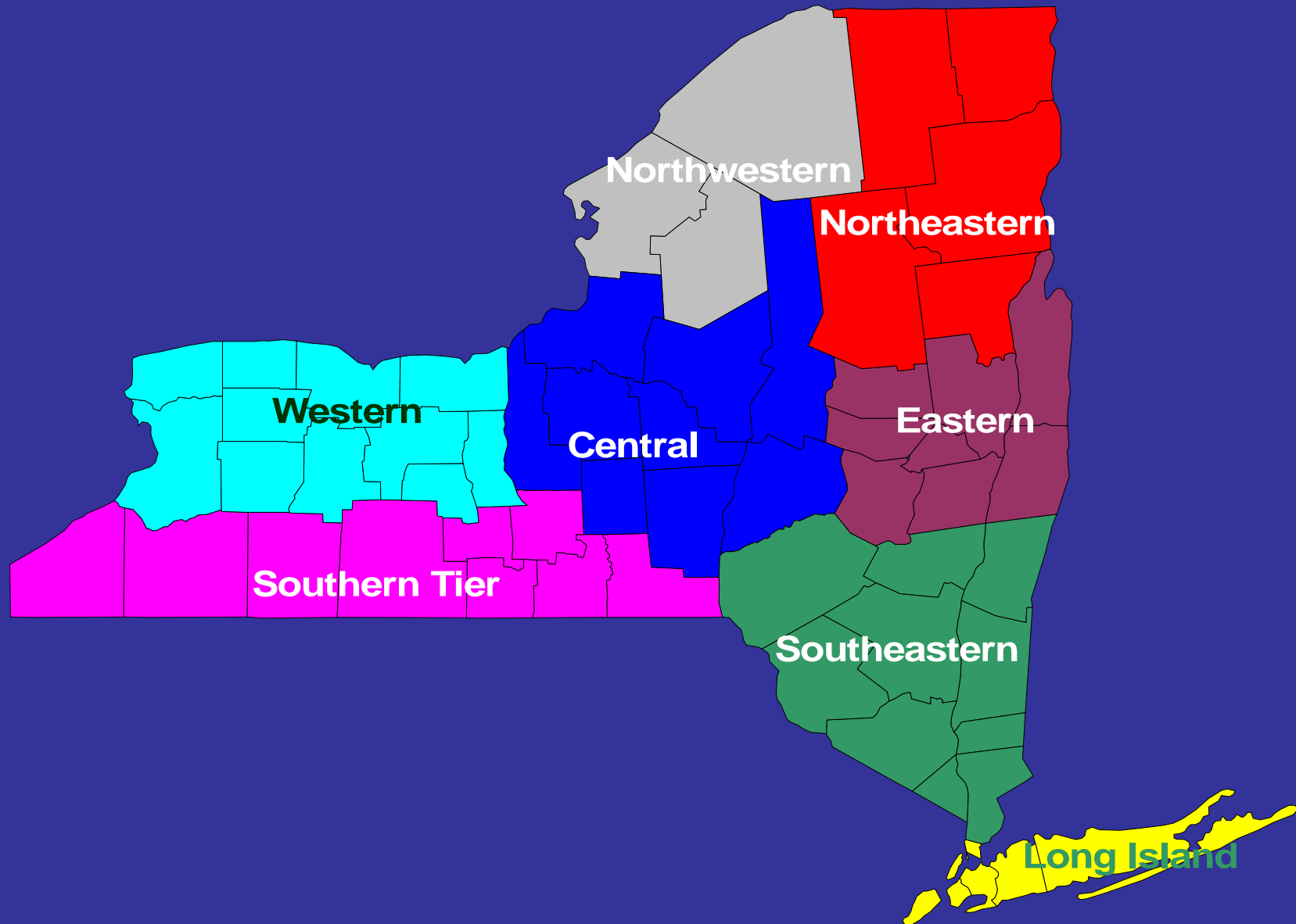


Cornell University
Cooperative Extension

2002 Grower Survey of Deer Damage to Agriculture

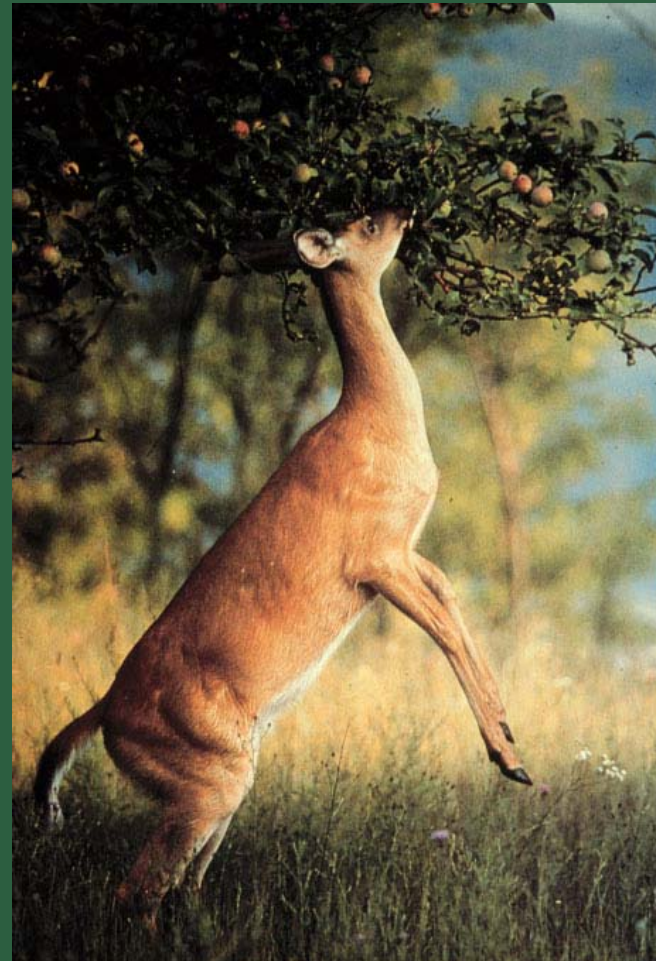
1. Estimate deer damage by crop types and regions
2. Assess use of DEC Deer Damage Permit system in controlling crop damage
3. Assess magnitude of deer damage compared to other wildlife damage

NYS Agricultural Regions



Reported Deer Damage by Region

<u>Region</u>	<u>Total damage (millions)</u>
Western NY	\$20.4
Southeast NY	\$14.7
Southern Tier	\$7.7
Central NY	\$7.5
Northwest NY	\$4.3
Eastern NY	\$2.5
Long Island	\$1.8
Northeast NY	\$0.8



Total Estimate of Statewide Deer Damage: \$58.8 million

		Total damage <u>(millions)</u>
Grain crops	23%	\$13.6
Nursery products	18%	\$10.5
Tree fruits	16%	\$9.4
Alfalfa	12%	\$7.4
Other hay crops	12%	\$7.1
Vegetables	11%	\$6.2
Grapes	3%	\$1.8
Berries	2%	\$1.1

Species Responsible for Damage

- 83% of farmers listed deer in their top 3 species; deer caused an avg. of 48.8% of total wildlife damage
- 30% of farmers listed turkeys in their top 3 species; turkeys caused an avg. of 15.5% of total wildlife damage
- 21% of farmers listed geese in their top 3 species; geese caused an avg. of 16.9% of total wildlife damage
- 20% of farmers listed groundhogs in their top 3 species; groundhogs caused an avg. of 15.1% of total wildlife damage
- 15% of farmers listed raccoons in their top 3 species; raccoons caused an avg. of 17.1% of total wildlife damage

As A Landowner, You Have Control Of Hunting On Your Property

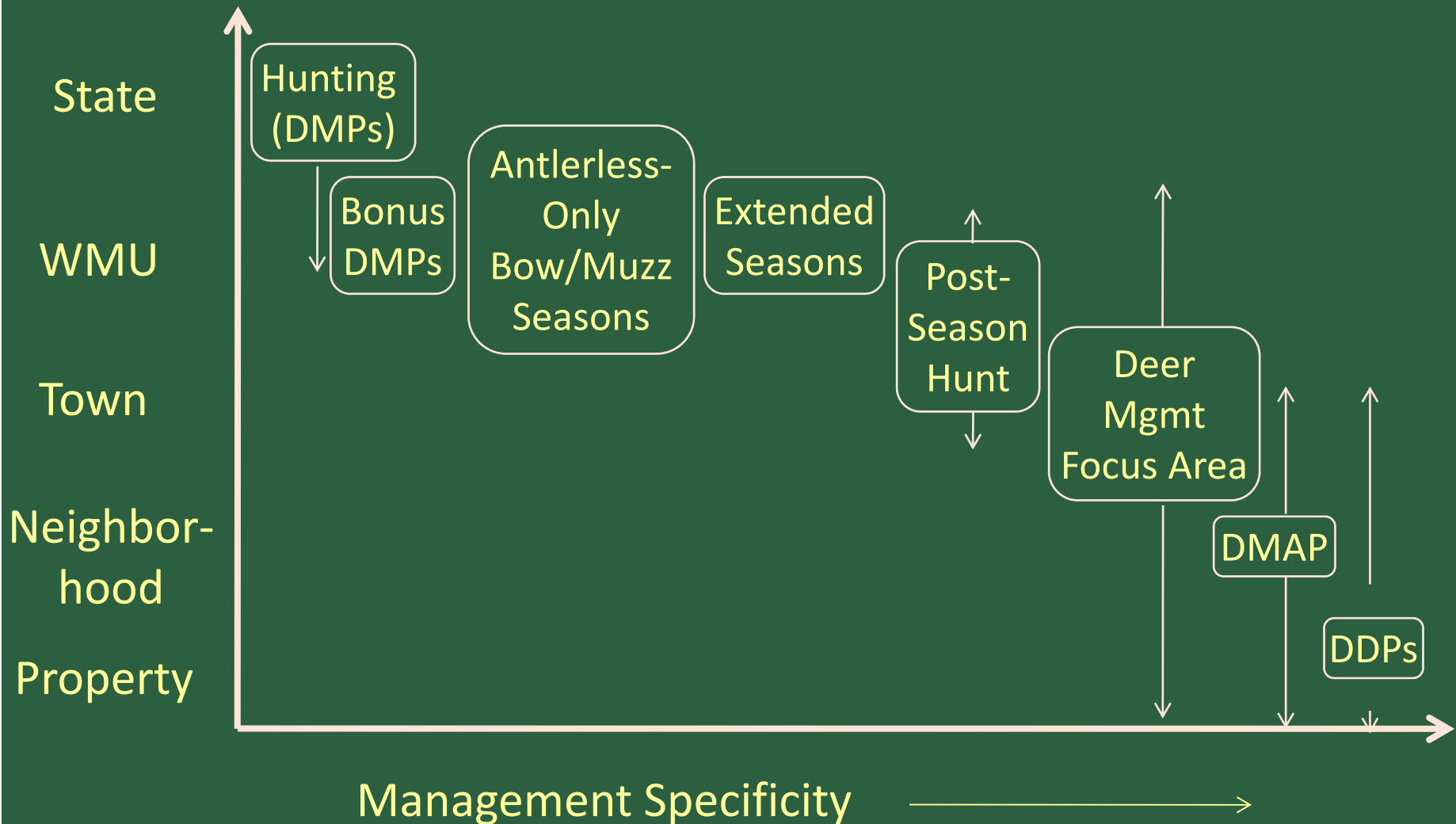
- Tailored to meet your local needs
- Restrictions on who, when, where and how
- Sex, age, and number of deer to be taken
- Marksmanship requirements
- Must check local town and village discharge ordinances



OR



Various Scales of Deer Management in NY



Hunting Policies of Growers

- 83% of growers allow hunting on their farms
- 66-74% of farmers allow family members, friends, and neighbors to hunt
- Only 30% allow strangers to hunt
- For the 17% of growers with no hunting access, liability and hunter problems were their primary concerns
- Most farmers (80%) do not restrict the sex of deer taken
- About 9% require that some does be taken, and 6% allow bucks-only hunting

Deer Hunting

- Manage deer on a landscape scale- take more females
- Use DEC DMAP or DDP permits on farms with high damage
- Encourage hunters to take does



Use of DMAP Permits

- About half (47%) of growers were aware of DMAP Permits from DEC
- Of those aware, 31% applied for DMAP Permits
- On average, 7.5 DMAP Permits were obtained per applicant, and 5.6 deer were killed



DEC Deer Damage Permits

- Provides access to deer in non-hunting areas
- For taking deer outside hunting season
- Antlerless deer only (usually)
- Can use bait to attract deer
- May use lights for shooting until 11 PM
- ECL-mandated discharge distance
- Limit based on number of tags issued
- Report to NYSDEC



Use of Deer Damage Permits

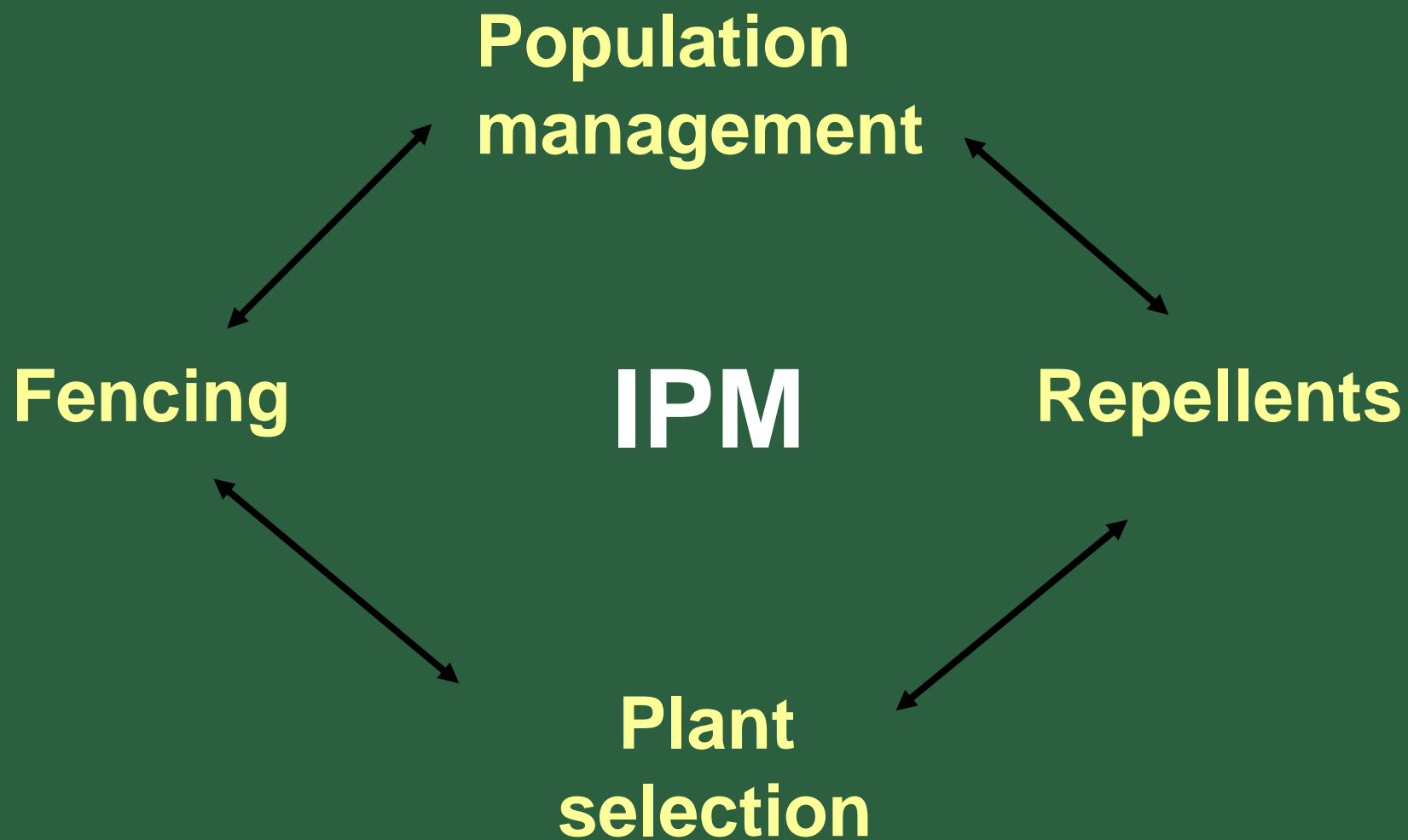
- About 2/3s of growers were familiar with DEC Deer Damage Permits (DDPs)
- Only 12% applied for DDPs
- 15% of farmers with DDPs said they had difficulty finding designated shooters
- On average, 8.4 DDPs were obtained per applicant, and 7.3 deer were killed

Factors Influencing Deer Feeding Pressure

- Deer population density
- Food & cover sources
- Travel corridors
- Alternative foods
- Season & weather
- Deer nutrition
- Palatability
- Previous experience



Management Options

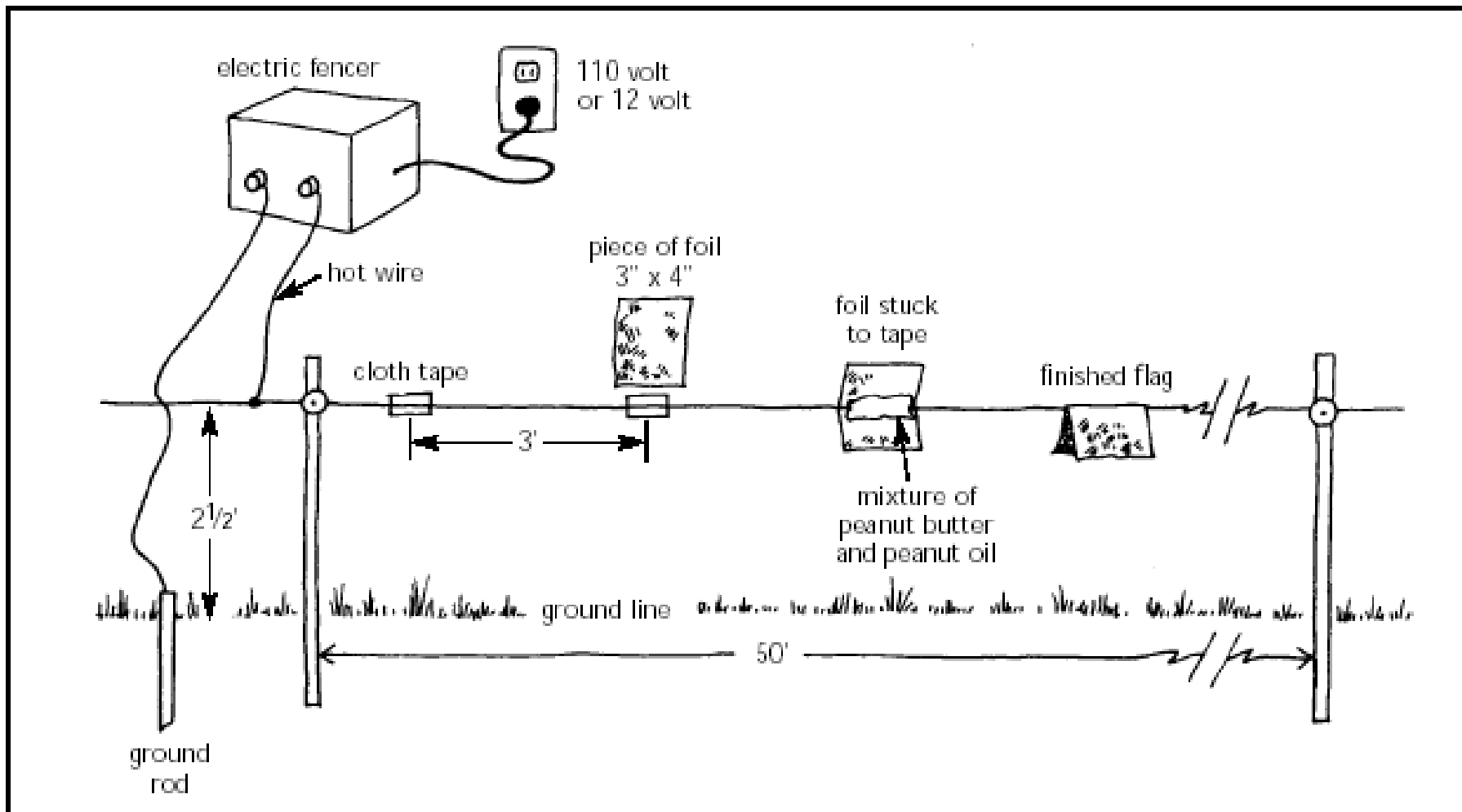


Deer Exclusion Alternatives

- 8-foot woven-wire fences
- Electric fences



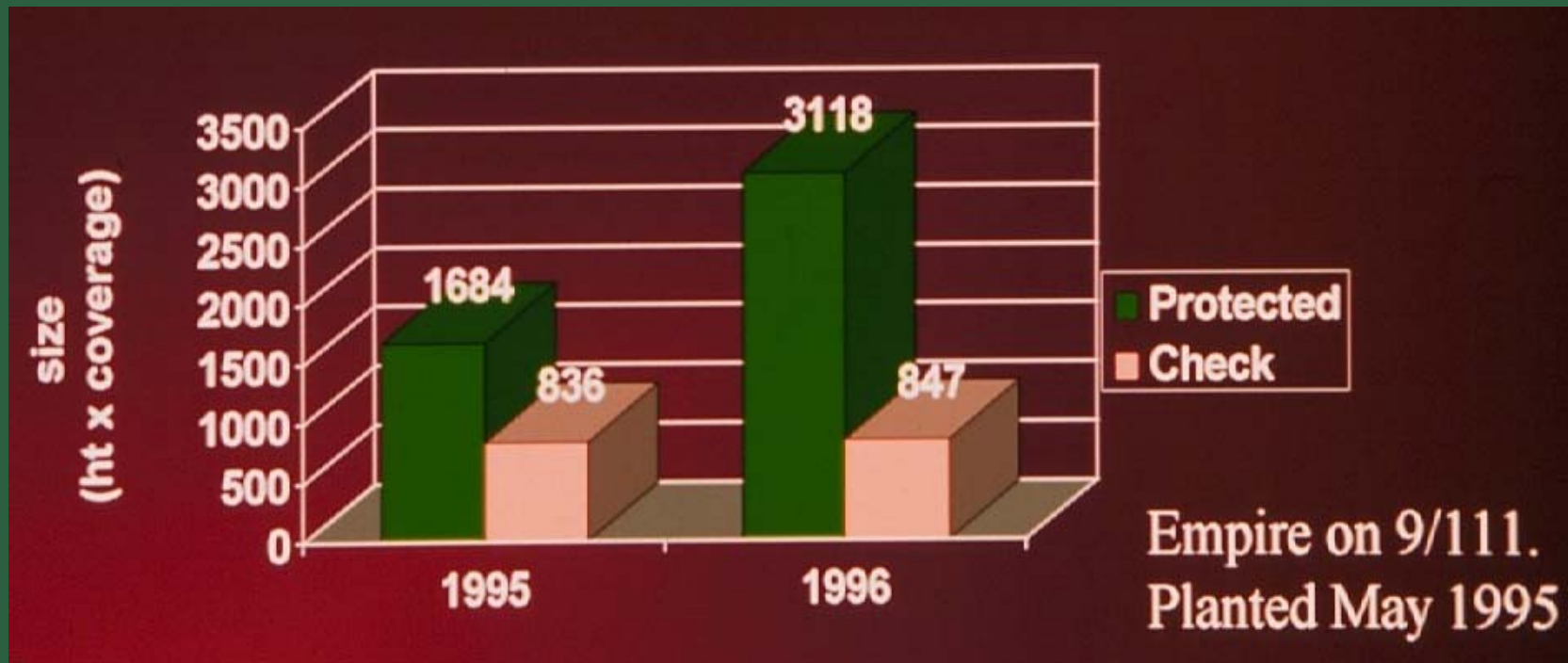
Baited Electric Deer Fence



Invisible Fencing and Dogs



Effect of Deer Browsing on Growth of New Trees



Off Limits protected trees had twice the growth of check trees after the first season and over 3x the growth of check trees after the second season

Deer Management Summary

- Exclusion provides the best long-term deer control
- Harvest of female deer on farms should be encouraged
- Most growers consider lethal deer control at least somewhat effective for reducing damage
- Dogs and invisible fences had a positive economic return in fruit orchards

