JAPANESE BARBERRY CONTROL ALTERNATIVES

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Japanese Barberry – the problem

- **Human Health**
  - Increased nitrification
  - Decreased litter layer

  } May affect water quality in adjacent reservoirs

  - Increased tick populations
- **Ecosystem Health**
  - Lower tree regeneration
  - Fewer herbaceous plants (wildflowers)


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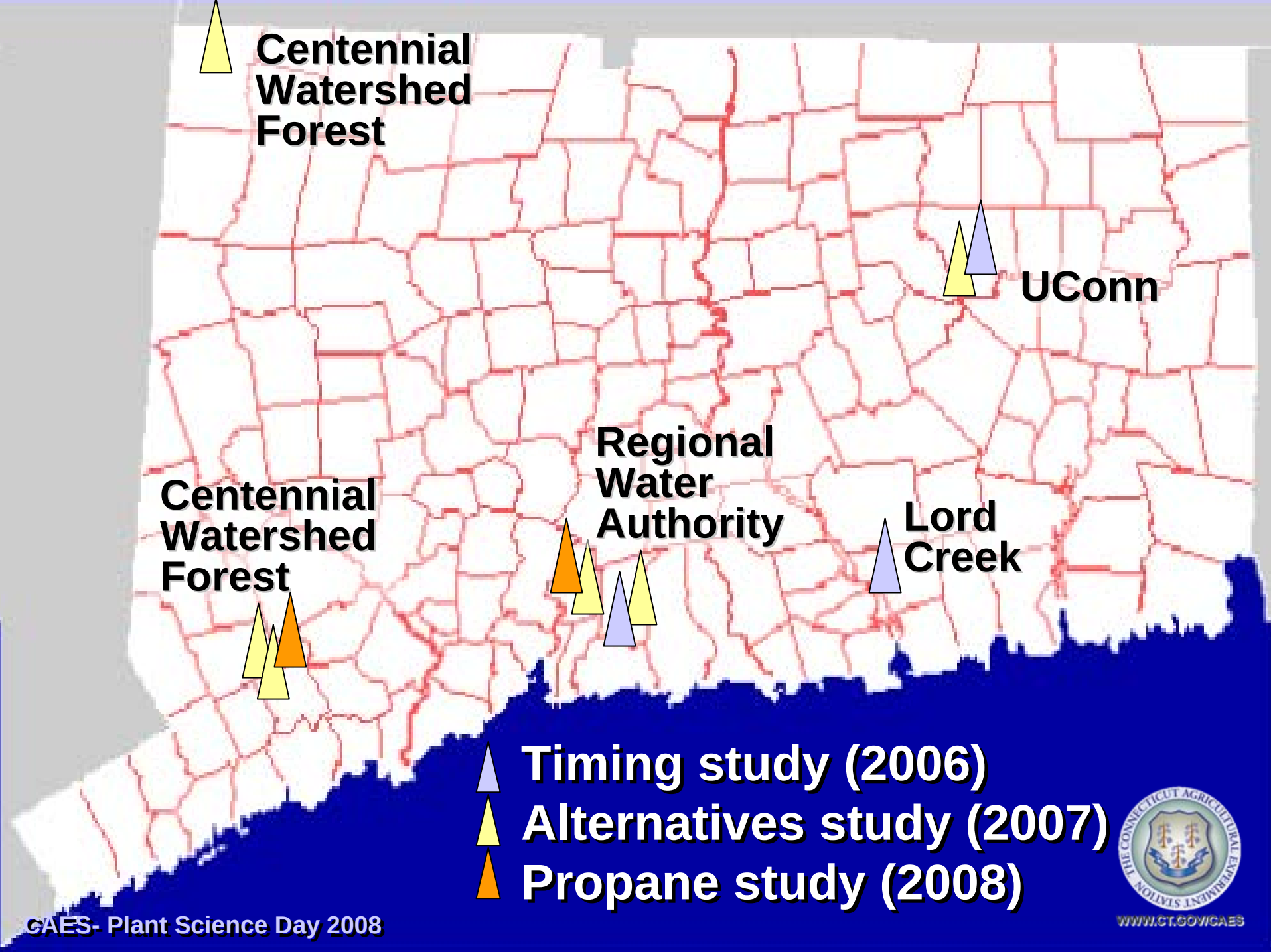
Centennial Watershed Forest
UConn
Regional Water Authority
Centennial Watershed Forest
Lord Creek
Timing study (2006)
Alternatives study (2007)
Propane study (2008)
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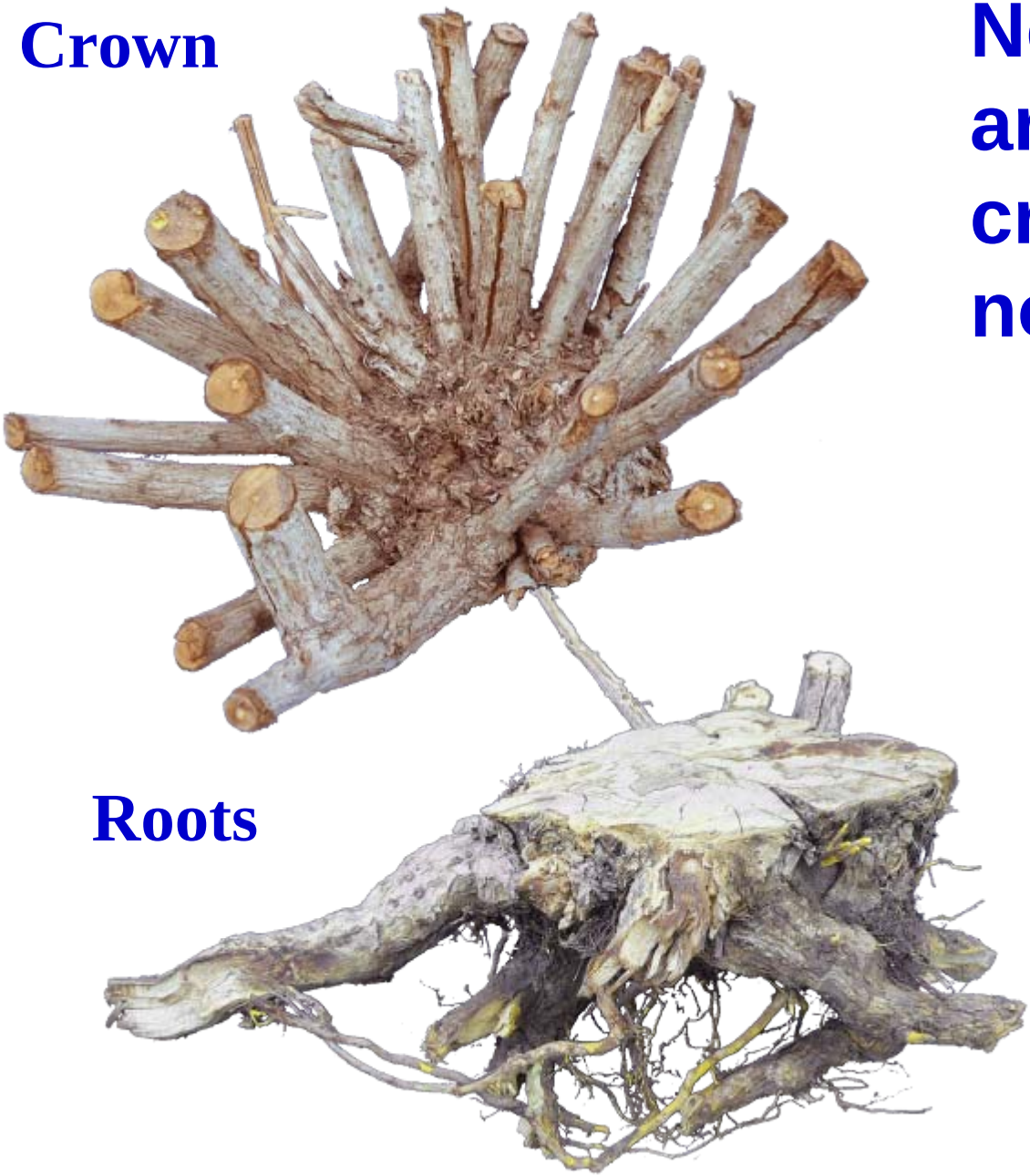
Crown



Roots

New stems arise from the crown (top), not from roots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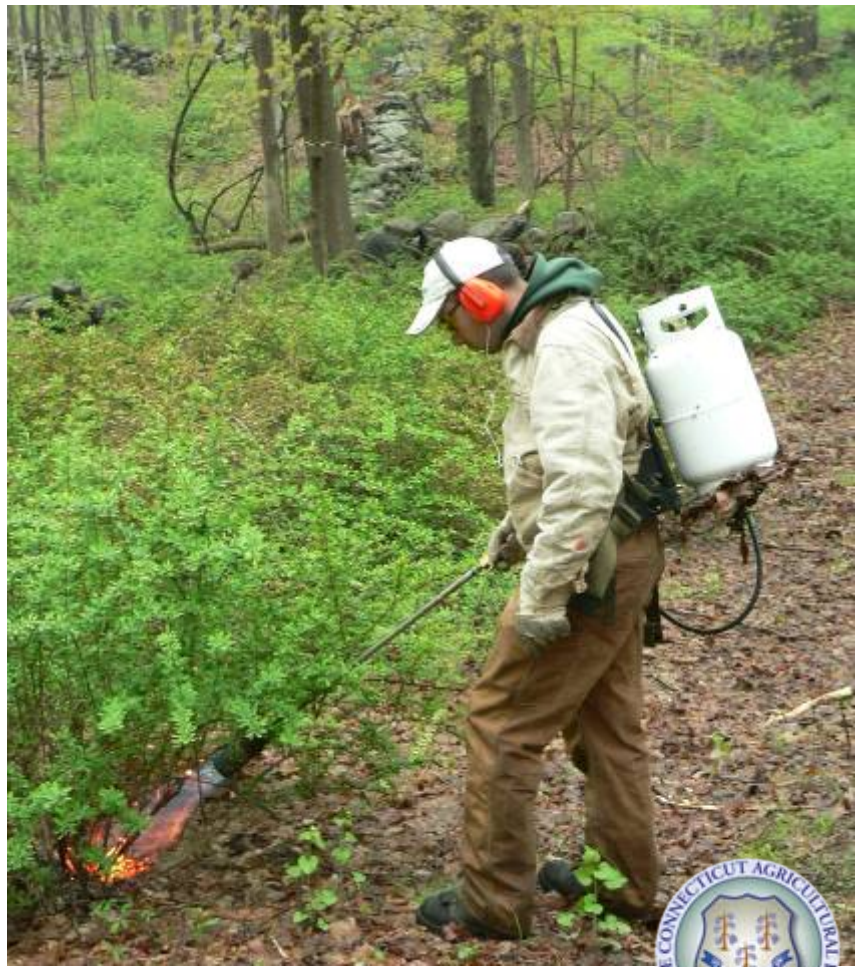
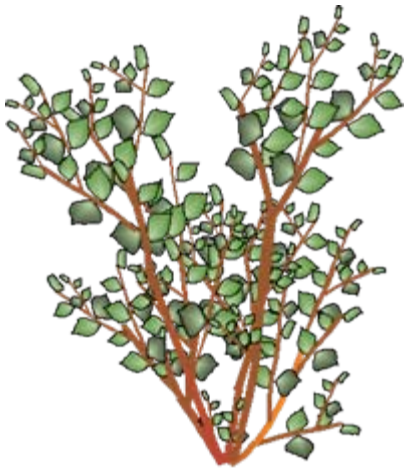
Initial timing not crucial

Dormant season

Growing season



2-Step Procedure



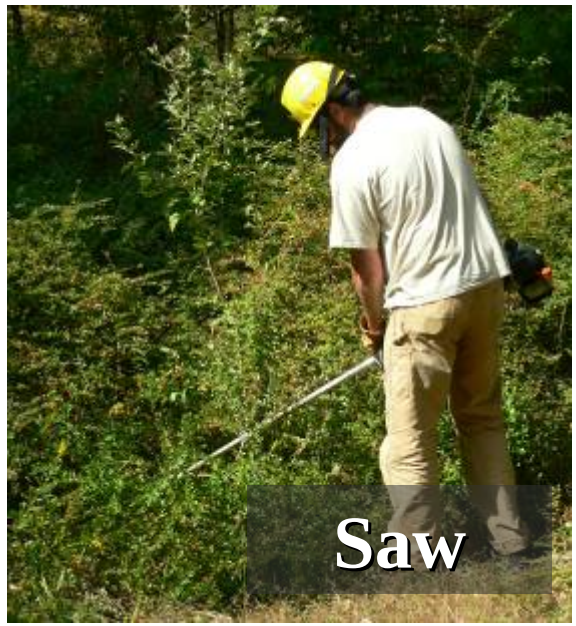
Initial healthy plant

Step 1 – Kill aboveground tissues by cutting or with fire

Roots grow new shoots, lowers root reserves

Step 2 – Kill smaller plants with heat or herbicides

1st step – Reduce size



Prescribed fire

Effective (except dense clumps)

Relatively cheap (20+ acres)

Site/personnel limited

Brush saw

Effective (if ≤ 3 ft tall)

Moderate cost

Must get all stems

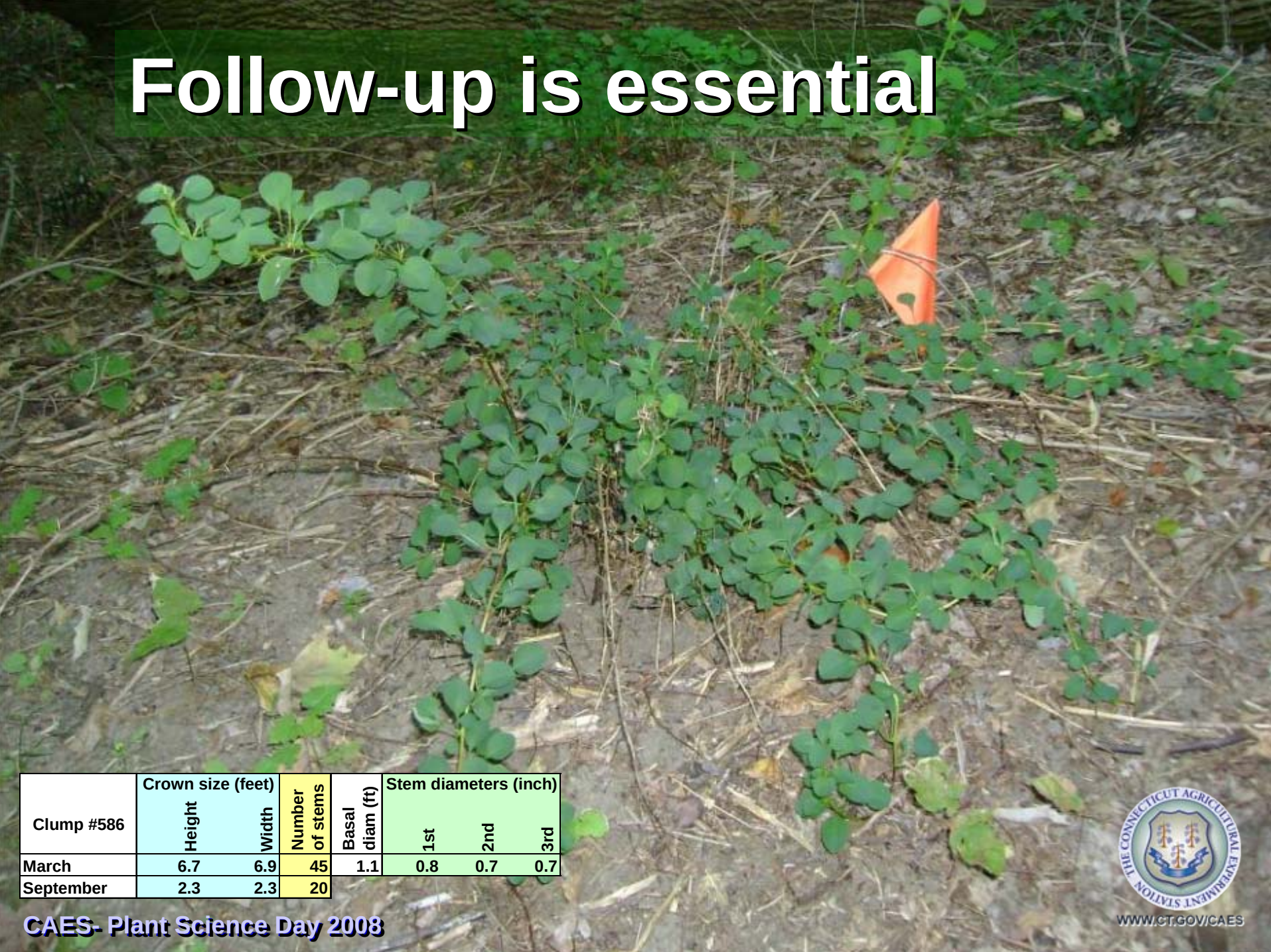
Chopper

Needs follow-up

Expensive

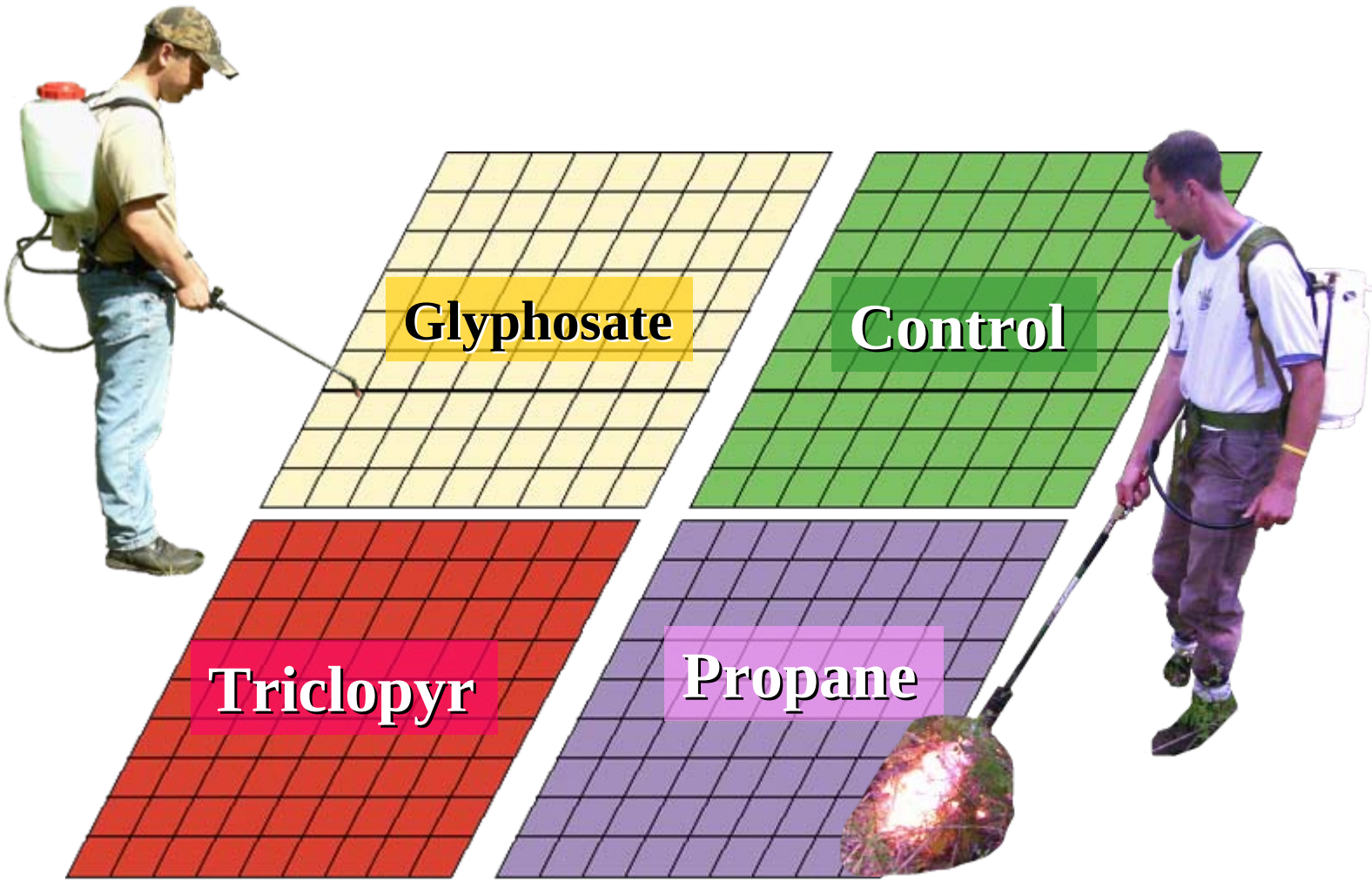
Needed if barberry taller than 3 ft

Follow-up is essential

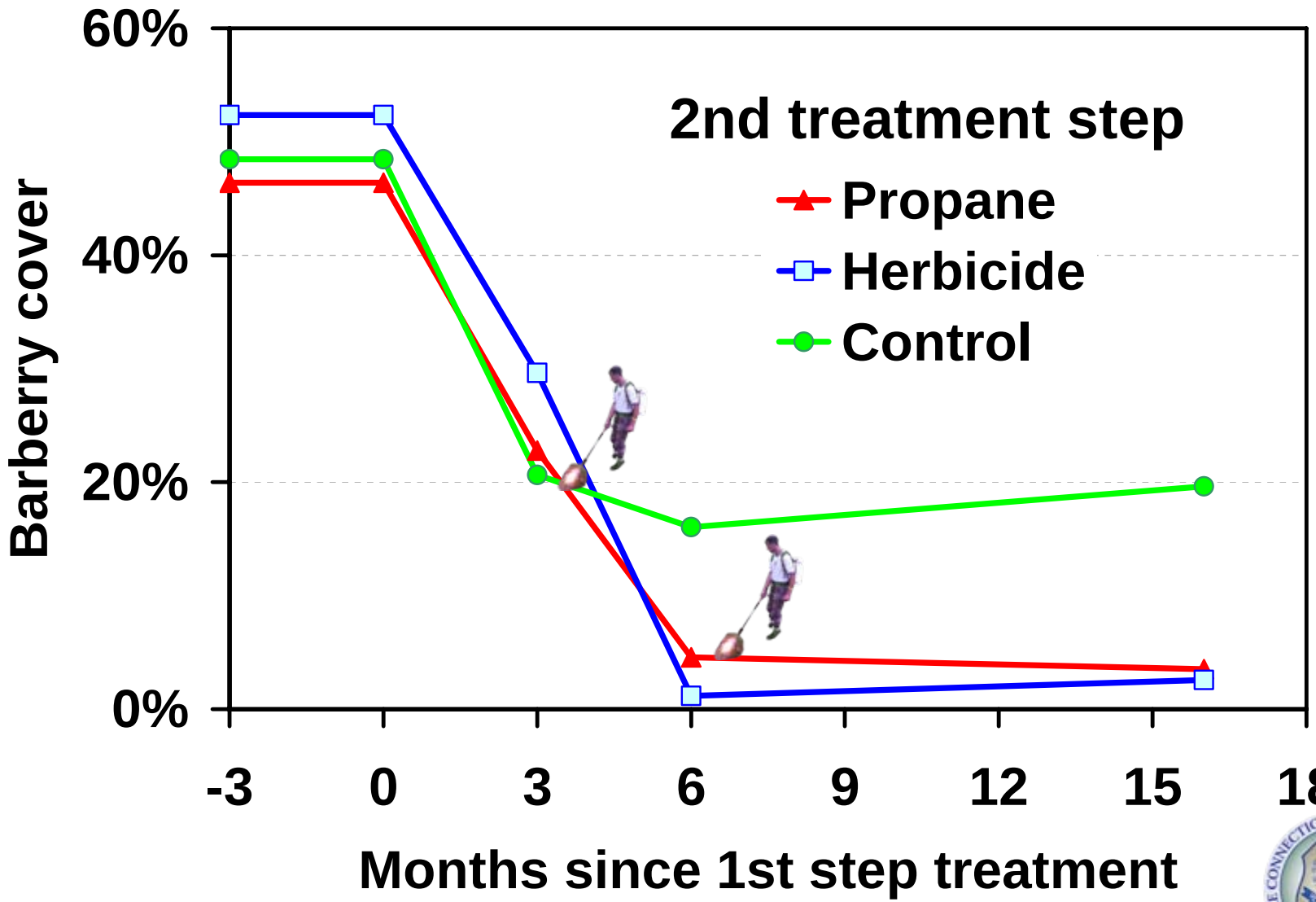


Clump #586	Crown size (feet)		Number of stems	Basal diam (ft)	Stem diameters (inch)		
	Height	Width			1st	2nd	3rd
March	6.7	6.9	45	1.1	0.8	0.7	0.7
September	2.3	2.3	20				

2nd step - Kill sprout clumps



Barberry can be controlled!

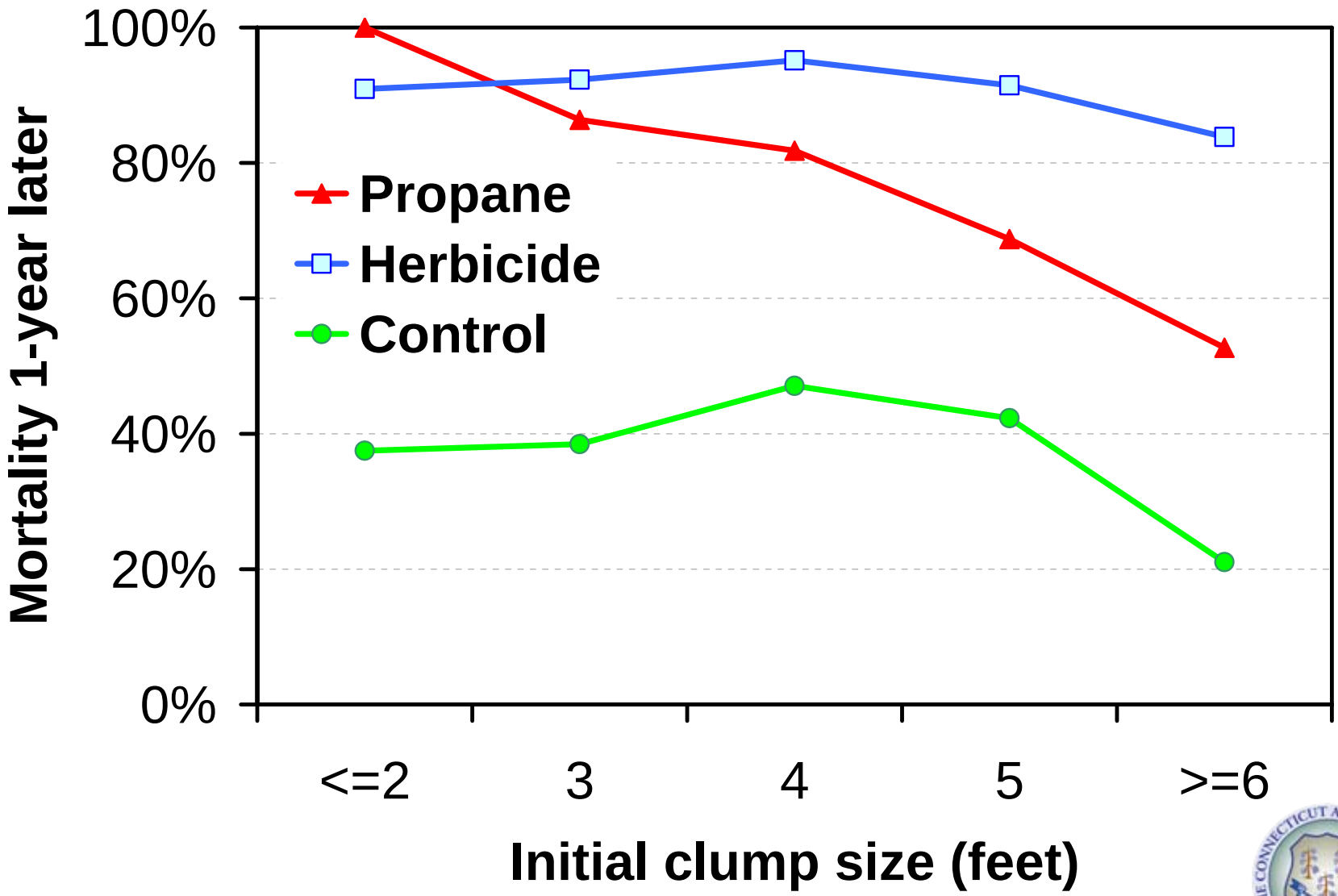


Propane torch useful for:

- Wetland areas
- Small patches or parks
- When volunteer labor pool available

- Leaf litter must be damp

Herbicide better for largest clumps



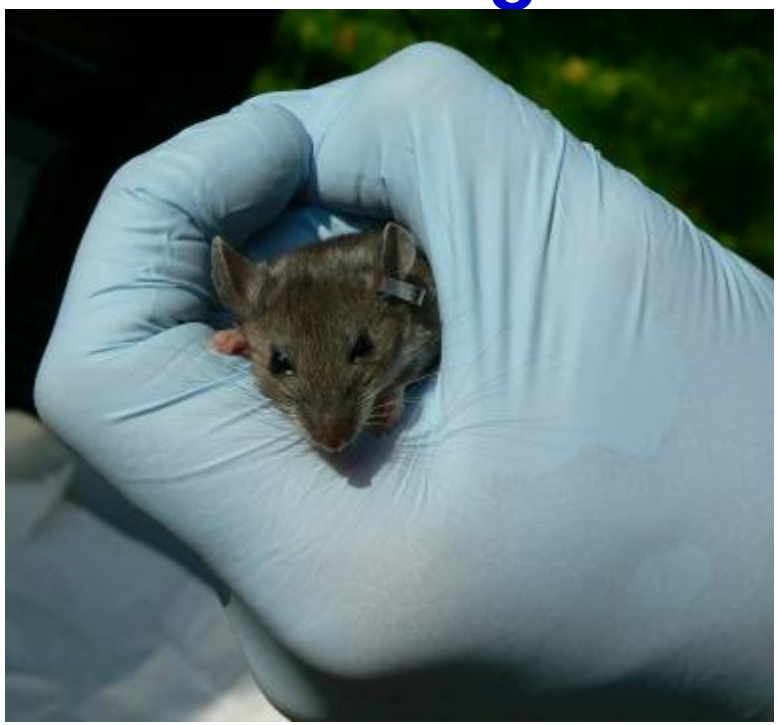
Consider herbicide where:

- Clumps larger than 4-feet
- Barberry is growing in full sun
- Where oriental bittersweet also present

- Native wildflowers and tree seedlings may be killed

Potential to reduce tick populations

Scott C. Williams
Kirby C. Stafford III
Louis A. Magnarelli



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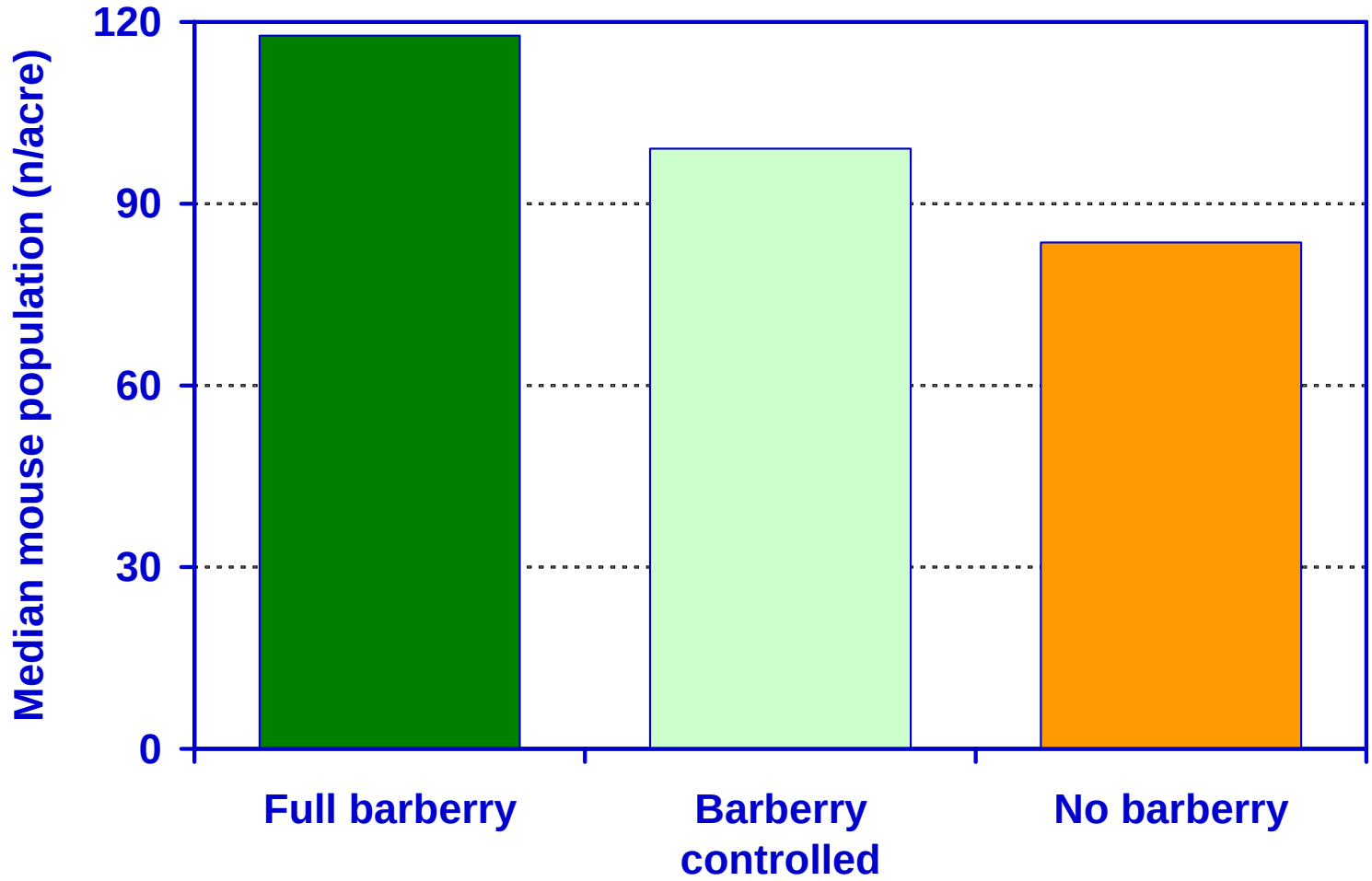
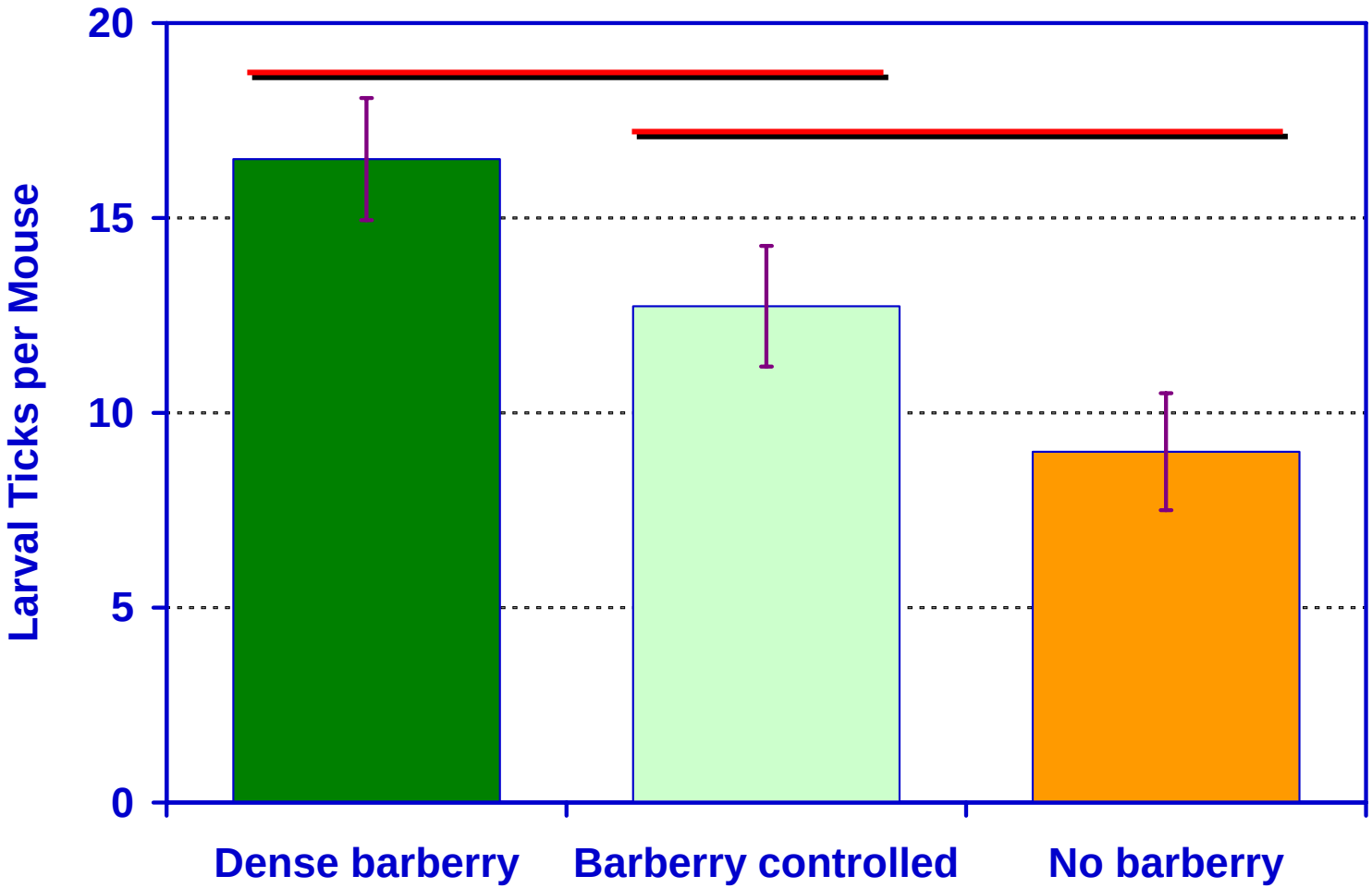
Barberry controlled → fewer mice



Less barberry → Fewer larval ticks



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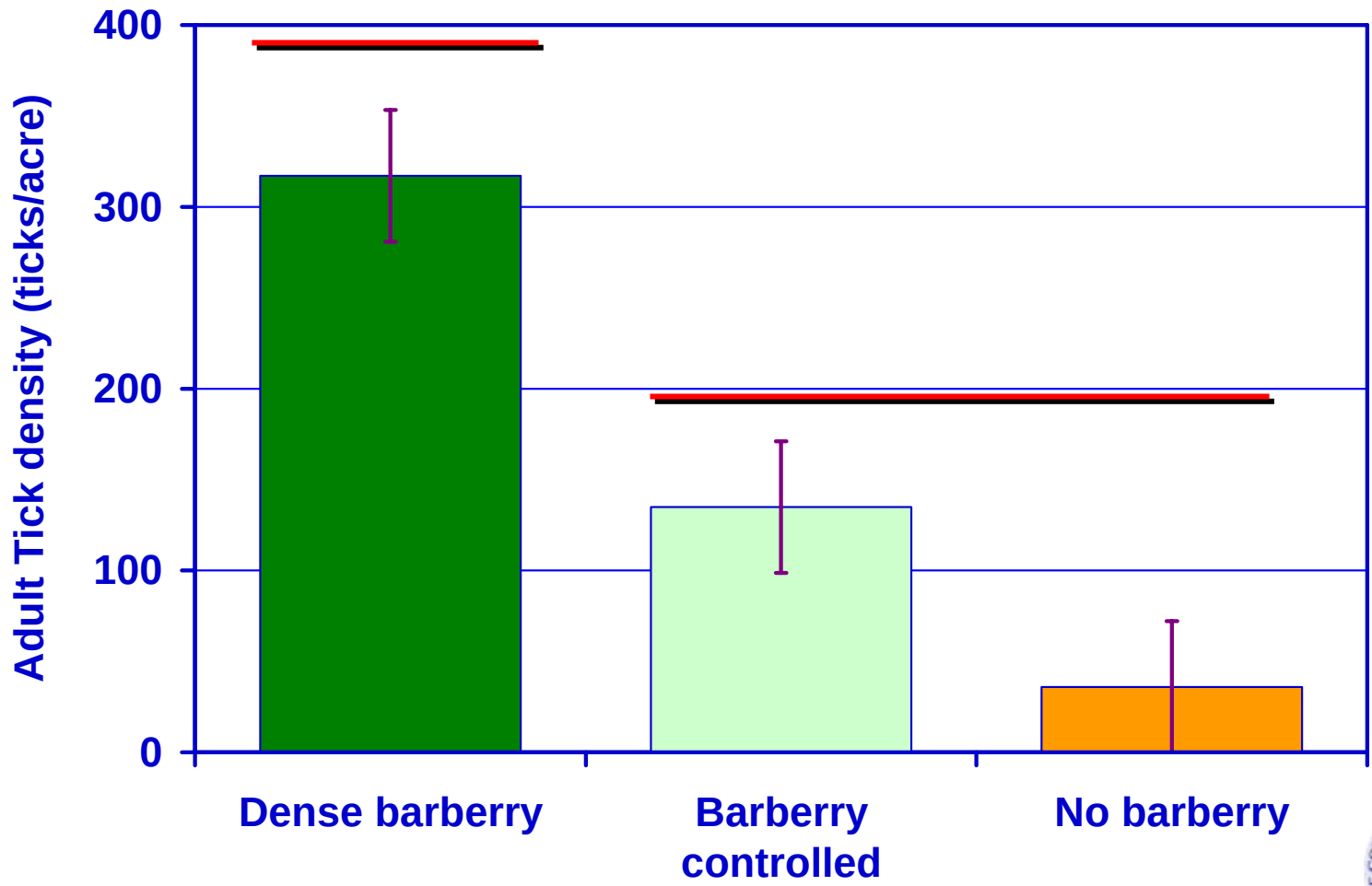
Barberry controlled → fewer adults ticks



Barberry can be controlled, and propane provides an organic alternative

Barberry control appears to reduce tick populations

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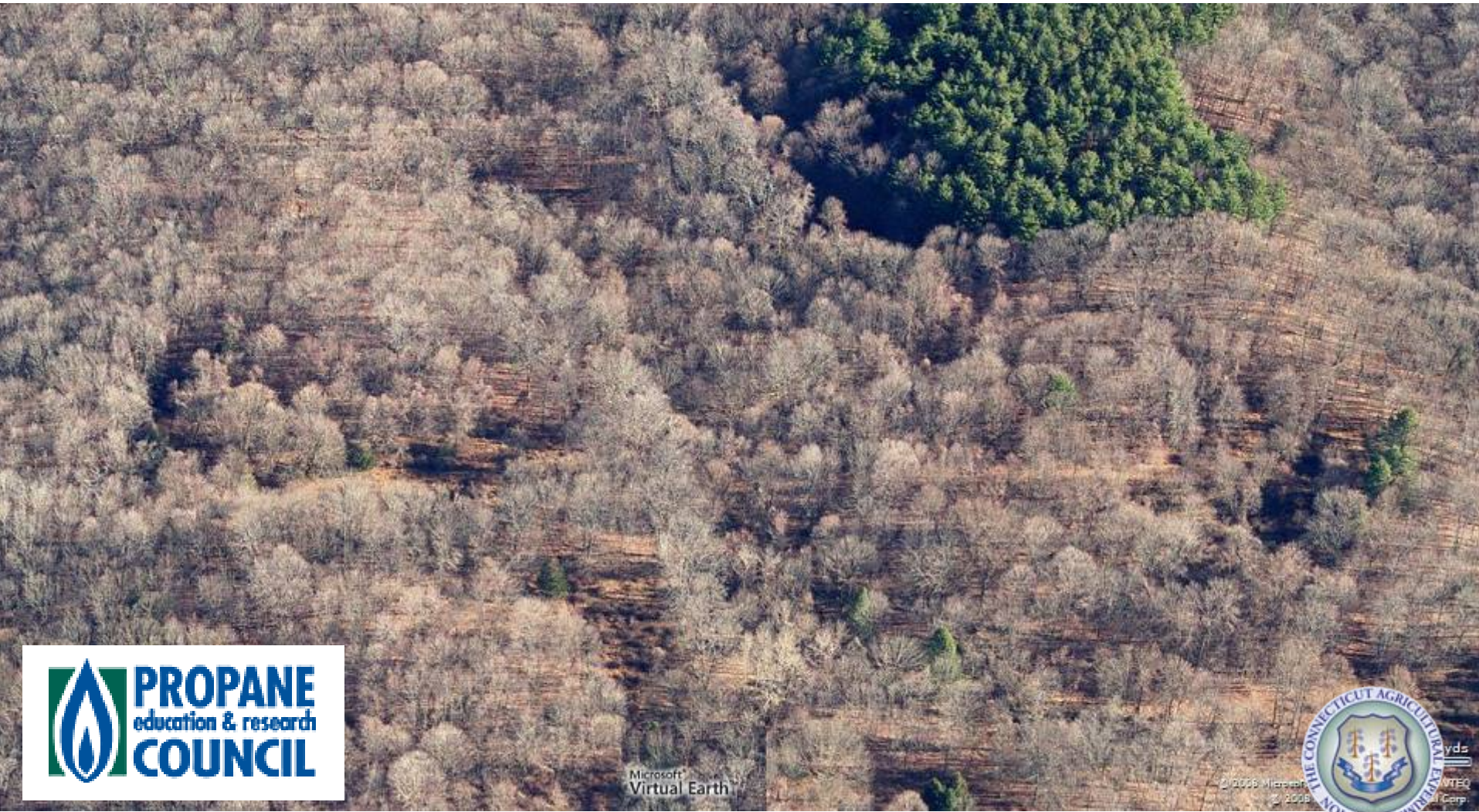
Large scale (5+ acre) barberry control
& Effect on mice and tick populations

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Propane torch studies

- Japanese stiltgrass
- Multiflora rose
- Honeysuckle
- Winged euonymus

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