PENNSYLVANIA
DEPARTMENT OF AGRICULTURE

NOXIOUS WEED TASK FORCE

KUDZU ERADICATION PROGRAM

Kudzu History in Pennsylvania

- 1876 Philadelphia Centennial Exposition
- 1920 Herbarium Specimen from West End Park, Pittsburgh
- 2003 a West End Park, Pittsburgh Kudzu infestation eradicated
- At least 4 active sites in the state are known to be 80 yrs or older

80 yr old vine

Pilot Kudzu Eradication Program in Pennsylvania

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Tool Bar: Animal and Plant Health - Weeds

History of Regulation of Kudzu in Pennsylvania

- 1983. Documentation of viable seed at several sites
- 1984. PA Noxious Weed Control Committee meets
  - voted to place kudzu on the PA Noxious Weed List
- 1985. PDA Regulatory Hort. Brochure announcement
  - less than 20 known sites in the State
- 1989. Officially became a PA Noxious Weed
- 2000. Soybean rust concern increases surveying and PDA begins treating 5 locations
- 2005. Pilot Kudzu Eradication Program is launched

3 Year Pilot Program

Background Information

2005 Pilot Program Proposed

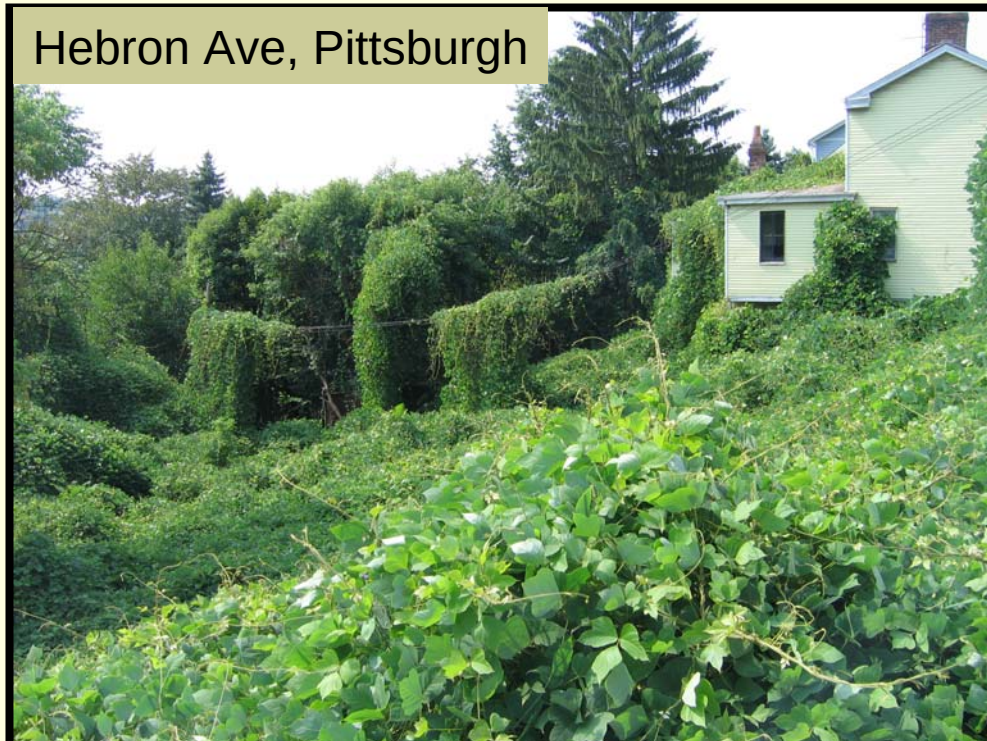
Proposal:

- Treat sites for 3 consecutive years to assist property owners with eradication of kudzu infestation

- Initially only planned to include 10 sites already being treated prior to 2005 and 3 new sites
  - $50,000 kudzu funding from PA Legislature received in fall of 2006 enabled program to expand to current capacity
  - Hotline number and subsequent press releases quickly increased number of reported observations in the state

Known Sites of Kudzu in Pennsylvania

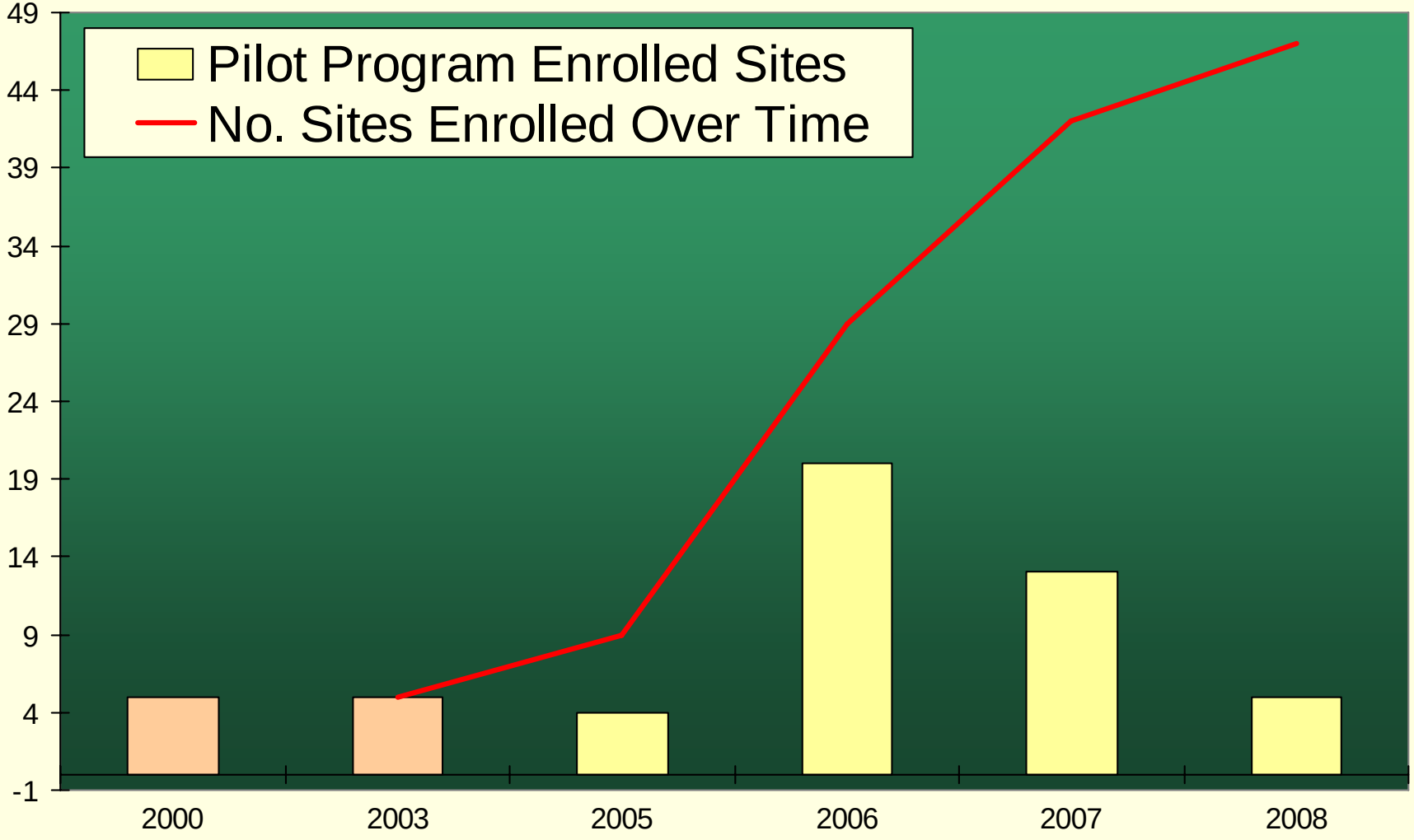
- 137 properties confirmed with Kudzu
  - 47% property owners enrolled in “Program”
  - 48% of owners have not been contacted yet
- 89 confirmed spatially distinct populations
  - 11 treated by owner
  - 47 treated by PDA

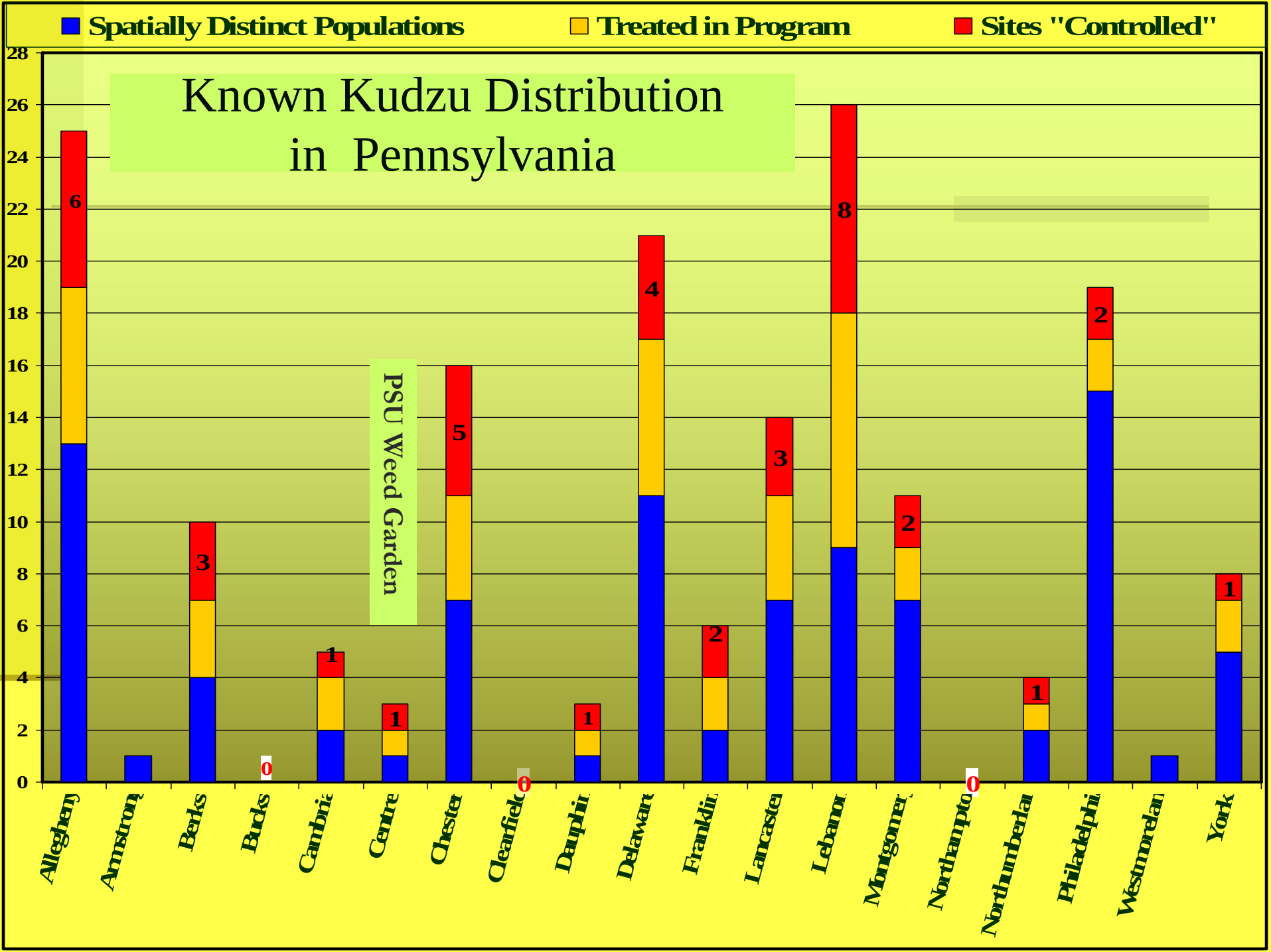

Hebron Ave, Pittsburgh

The majority of sites in Pennsylvania are less than ½ acre in size. However several sites are known to be larger than 3 acres.

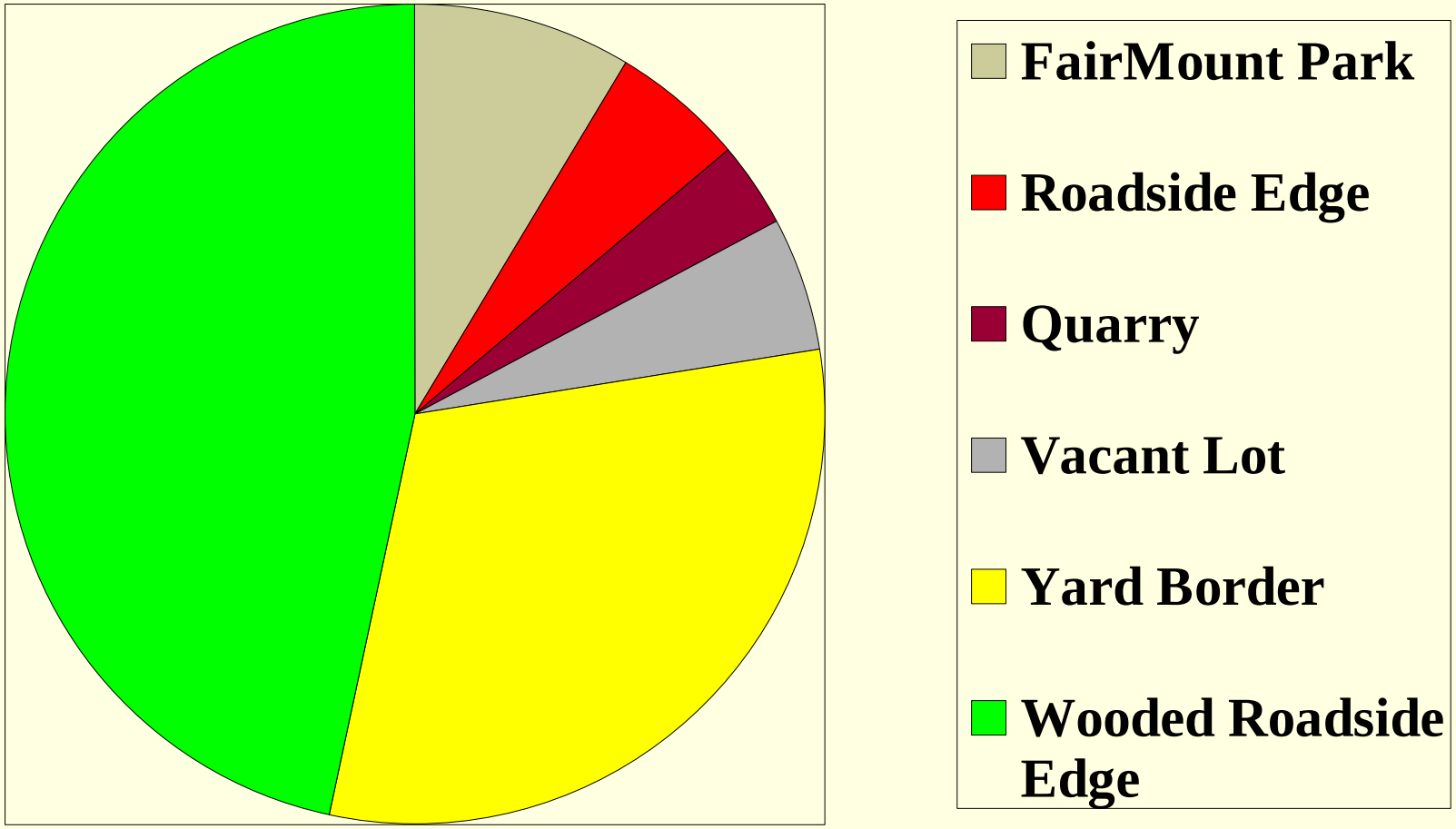
There are at least 50 acres of kudzu distributed across Pennsylvania as of the start of this program.

Kudzu Sites Treated by PDA




Spatially Distinct Populations
Treated in Program
Sites "Controlled"
Known Kudzu Distribution in Pennsylvania
PSU Weed Garden
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
6
3
0
1
1
5
0
1
4
2
3
8
2
0
1
2
1
Allegheny
Armstrong
Berks
Bucks
Cambria
Centre
Chester
Clearfield
Dauphin
Delaware
Franklin
Lancaster
Lebanon
Montgomery
Northampton
Northumberland
Philadelphia
Westmoreland
York

Kudzu Site Descriptors in Pennsylvania



Treated Sites

Kudzu Site Descriptors

- Roadside Edge
  - Slope
  - Soil stabilization concerns
  - Trees
  - Power lines

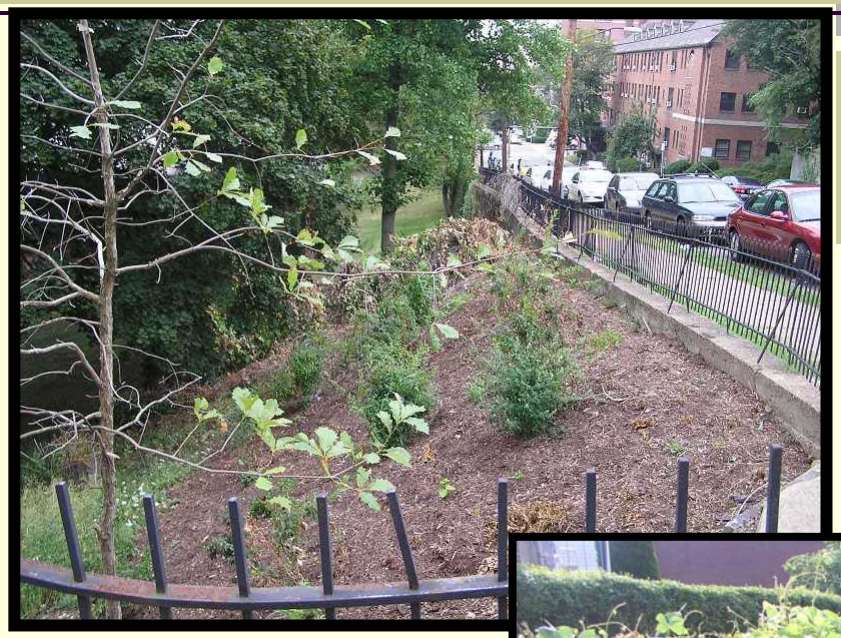
1 acre infested, 50 acre Housing Development, former Bethlehem Steele slag property

Kudzu Site Descriptors

- Vacant Lot
  - Open space
  - Trees
  - Wells
  - Dumps
  - Debris

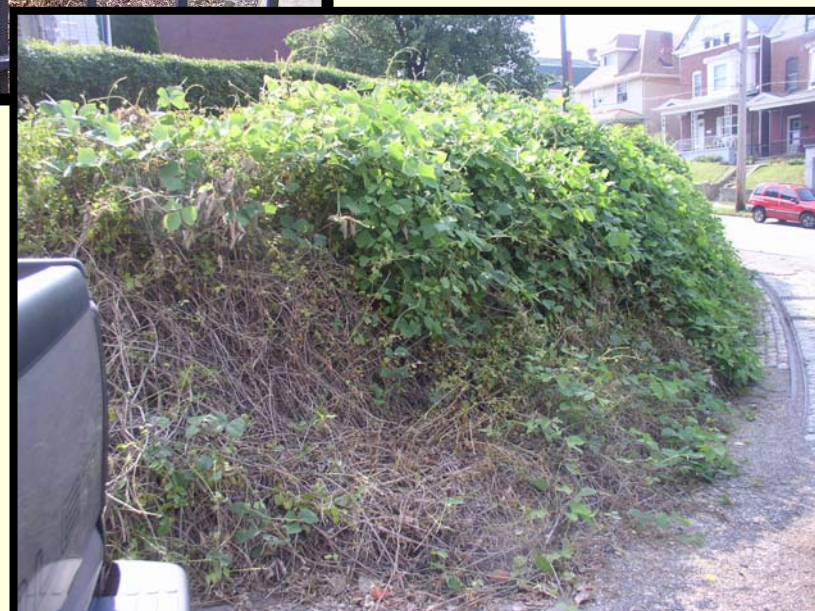
3 Acre infested, 375 acre Bethlehem Steele property

Kudzu Site Descriptors



Apartment Complex and Water Authority, City of Pittsburgh

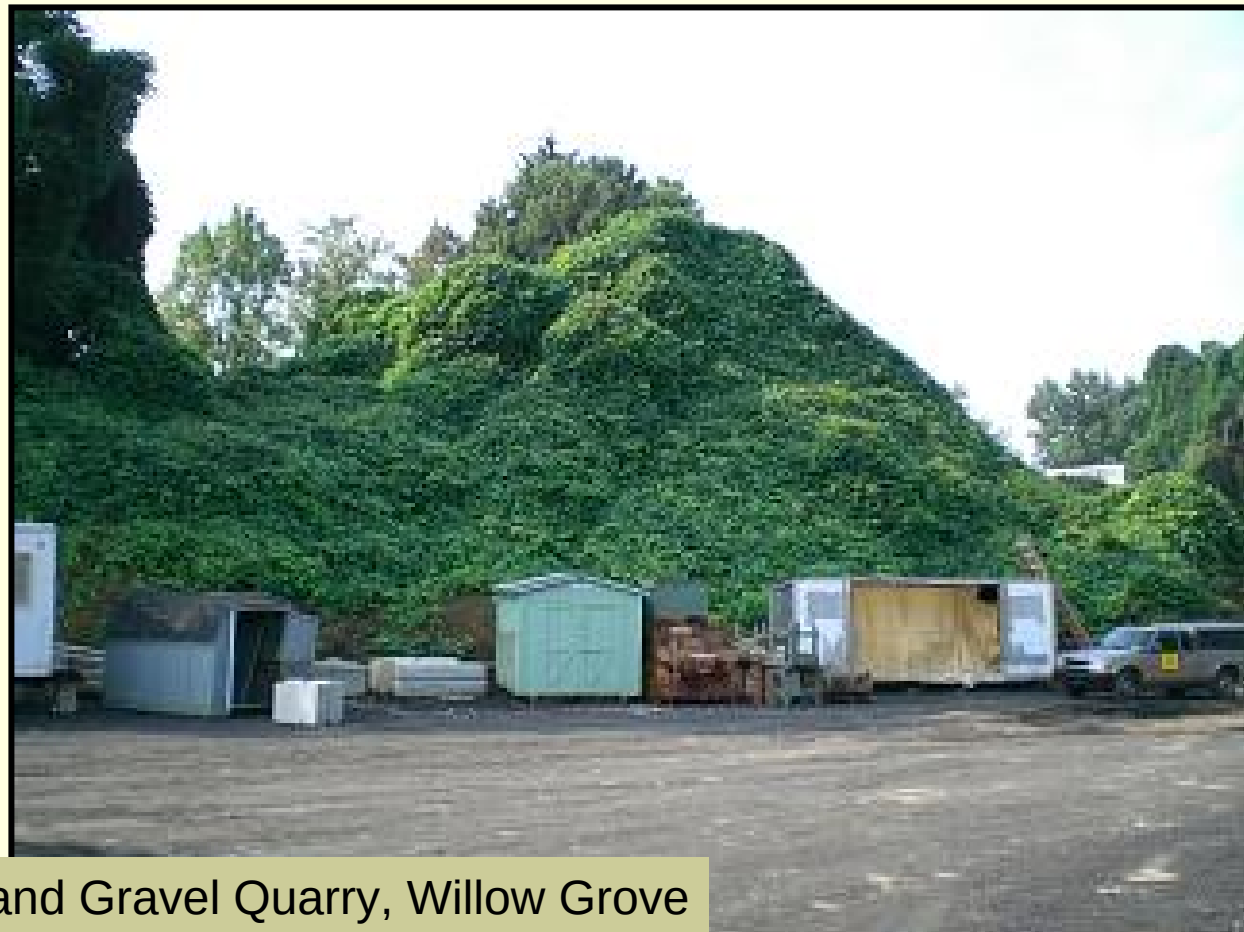
- Yard Borders
  - Open space
  - Residential
  - Slope
  - Water quality
  - Desirable forbs
  - Residual
  - Neighbor



Trolley Car turn-around, Pittsburgh

Kudzu Site Descriptors

- Quarry
  - Permeability to bedrock
  - Export of soil
  - Neighbors



2 acre infested, 50 acre Sand and Gravel Quarry, Willow Grove

Materials and Methods Used

HVF knockdown treatment

- Mixture:
  - 6 to 8 oz Transline
  - 45 gallons of water
  - .25% v/v NIS

Cut-stump application

- 2% v/v Transline
- 20 oz water
- .25% v/v NIS

HVF knockdown treatment

- Mixture:
  - 2 qts Garlon 3A
  - 45 gallons of water
  - .25% v/v NIS

Cut-stump application

- 5% v/v Garlon 3A
- 20 oz water
- .25% v/v NIS

Garlon 3A and NIS (HVF)

Typical Kudzu Crown Found in PA Sites

3 Year Site Evaluation Summary

- 3rd YAT Evaluation
- Goal: 100% prevention of above ground biomass production
  - Achieved: *But only if all above ground photosynthesis was prevented over time.*
  - All existing above ground vegetation treated during the 3 year period has died
    - No crowns have resumed growth
    - All crowns have been found and treated
  - Seed bank emergence continues to decline but all sites continue to have seed bank emergence 3 YAT
    - Very little literature available on viability of kudzu seeds
  - *Without monitoring and removal, seedlings quickly canopy site and are producing flowers in the second season*.

3 Year Program Summary

- Existing kudzu sites of the size and ecology found in Pennsylvania can be eradicated within 1 to 3 years depending on treatment regiment.
- Although time consuming, cut stump treatments of a 2% v/v solution of clopyralid is the most efficient means of eradicating mature kudzu infestations.
- Adding a HVF to knock down the site initially allows for easier movement through the infested site.
- For complete eradication success, all crowns must be identified and treated and seed bank monitoring must continue until the seedbank is exhausted.
- Burial of the seedbank is an effective means of eliminating the long term monitoring of the site.

The End.

Not all sites of kudzu should be controlled. The kudzu may be the only thing preventing destabilization