

WORKING TOGETHER IN CONTROLLING KUDZU

HERBICIDES & NON- HERBICIDAL METHODS

1 + 1 = 3

SE-EPPC

MAY 2009

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DEDICATED TO THE MEMORY OF THE LATE DR. LARRY NELSON



10-25-04

**IN 2007 SC-EPPC
CREATED A
KUDZU CONTROL
TASK FORCE
FOR SOUTH CAROLINA**

MATT NESPECA



PAUL SAVKO



THE KUDZU COALITION

- No paid employees
- No grants
- No herbicides
- Controlling kudzu in over 65 small sites

TYPICAL COALITION SITE (Ugly rat's nest)



BEAUTY RESTORED



MAINTENANCE REQUIRED



TALE OF THREE SITES

- Herbicides used first
- Non-herbicidal methods used later
- Observational tests

- Conclusion: Working together has benefits

JOINT STUDY PARTICIPANTS



LOOKING UPHILL - 2007



HOUSING AUTHORITY PROPERTY: MARCH 2007



ISSUE: CROWN DENSITY ($\frac{1}{4}$ Milli-Acre Sampling)



CROWN DENSITY

- 164,000 crowns per acre
- About 3.7 per square foot

FIRST TREATMENT: HERBICIDES

JULY 25, 2007



DOW AGROSCIENCES' MILESTONE VM [®]



PLAN FOR SECOND TREATMENTS SURGICAL . . . HERBICIDES



HOUSING AUTHORITY PROPERTY: AUGUST '07



SURGICAL CROWN REMOVAL TREATMENT



SURGICAL TREATMENTS

ADVANTAGE:

Little or no disturbance of soil
or other plants

Disadvantage:

Labor intensive
because lots of crowns

SURVIVING CROWNS: LARGE



VOLUNTEER AT WORK



REHABILITATION OF BANK



NEW FENCE AND GRASS



SURPRISE!



HOUSING AUTHORITY PROPERTY: April '08



HERBICIDE SIDE: MAY '08



MAY 2008



APRIL 2009



APRIL 2009



BEFORE AND AFTER OVERALL SITE



RESULTS

1. First year herbicide application in 2007:
98 % plus kill
2. Second treatment:
Non-herbicide half: Surgical methods
Herbicide half: Treated again
3. 2009 non-herbicide half:
33 crowns removed (about .05 %)
No kudzu visible as of May 8
4. Worked so well, a second joint project was initiated

SECOND JOINT PROJECT: A NEIGHBORHOOD

Hampton Heights

Run-down

Former drug area

Being restored

RAVINE AND CREEK



HAMPTON HEIGHTS KUDZU

About 6 acres

Mature kudzu

Estimate 900,000 kudzu crowns

Not have enough volunteers

NEIGHBORHOOD INFESTED



2 ND JOINT STUDY CONCEPT

- First treatment: Milestone VM ® (Late 2008)
Large crowns under trees: Kudzu Coalition
- Second treatment: Milestone VM ® (Late 2009)
Large crowns under trees: Kudzu Coalition
- Third treatment: Non-herbicidal mop-up

APPLICATION TEAM - 2008



APPLICATION: MILESTONEMV®



AFTER MILESTONE VM [®] APPLICATION



APRIL 2009



APRIL 2009



STATUS – MAY 2009

- Too early to reach conclusions
- But
 - Milestone VM ® effect is significant
 - Volunteers cut all vines going up into trees
 - Crowns & ivy removed at base of 30+ trees
 - Still a lot of work to do

3RD TEST OF COMBINATIONS OF METHODS

- Sumter National Forest
- Leader & sponsor: Ranger Mary Morrison

SEDALIA HUNT CAMP – 23 ACRES



SEDALIA HUNT CAMP SITE

History: Three years of herbicide application
Kudzu still present

Purpose of test:

Avoid using additional herbicides

KUDZU COALITION SWAT TEAM AND CONTRACT WORKERS



DEER HAD EATEN KUDZU LEAVES



HUNDREDS OF LARGE KUDZU CROWNS HAD SURVIVED



2007 RESULTS

- About 900 plants killed
- Virtually all were golf ball size or bigger

ROOT OF HERBICIDE SURVIVOR



2008 RESULTS

- Kudzu still present
- Kudzu Coalition was asked to repeat
- About 400 plants killed in 2008
 - Some plants were dormant in 2007
 - Some were missed in 2007 work

DO WE HAVE COMPLETE ERADICATION ?

- Probably not
- Crowns stressed by herbicides may remain dormant many years
- The Kudzu SWAT team probably missed some plants
- Stay tuned. We will count survivors in August

SUMMARY: SEDALIA SITE

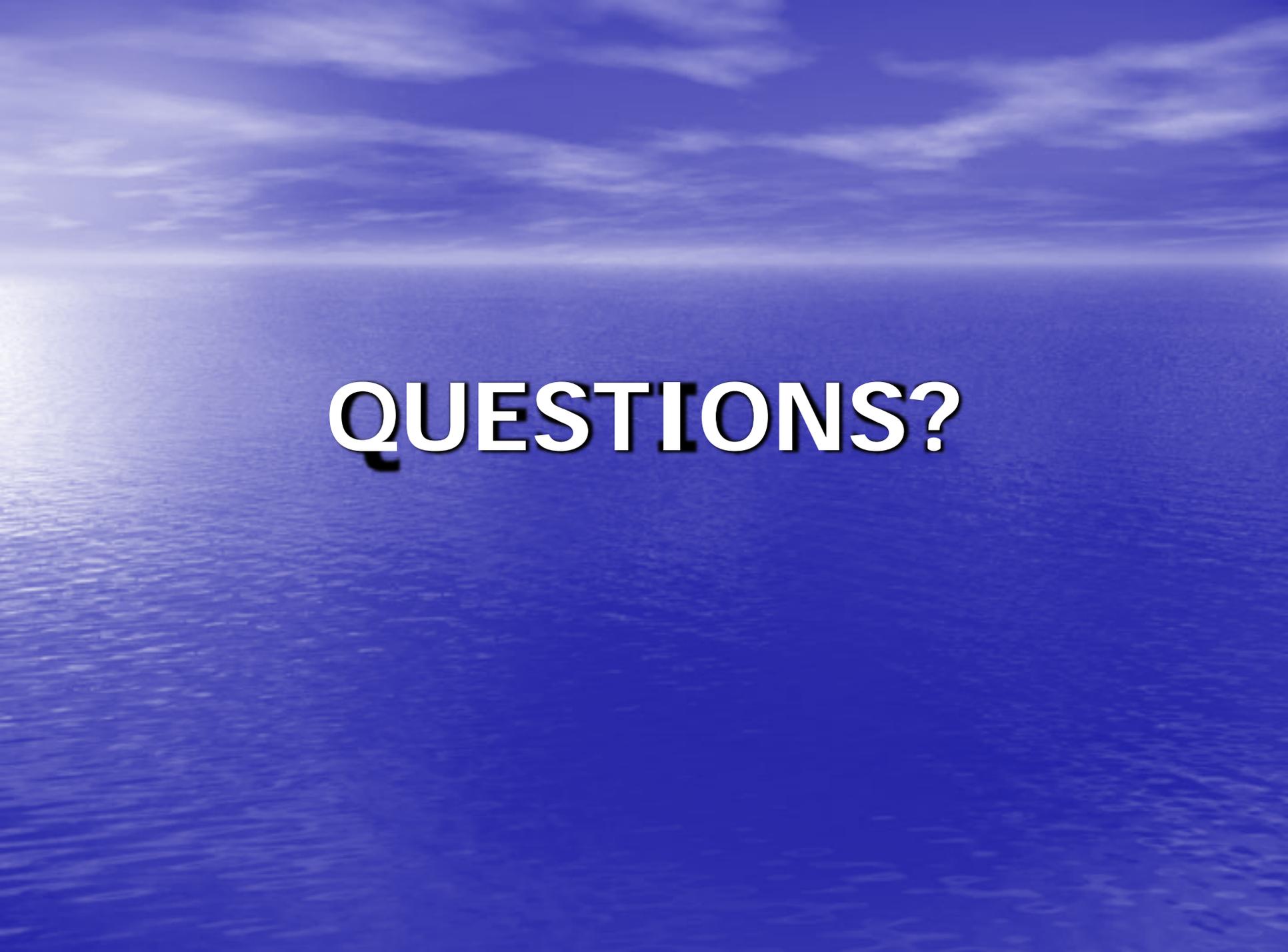
- Eliminated at least two herbicide sprayings
- Basically, no difference in cost
- Crowns stressed by herbicides can go dormant (Supported in literature)
- Conclusion:
Combination of methods can be effective

OVERALL CONCLUSIONS FROM THESE THREE TESTS

- Use of herbicides first made follow-up use of non-herbicidal methods practical
- Combination of methods worked well
- One plus one equals three!!

OBSERVATIONS

1. Each site is different.
2. No single method is best for all sites.
3. A combination of methods (integration) can be more effective than using a single method multiple times.

A blue sky with light clouds over a blue ocean with a sun reflection.

QUESTIONS?