



Considerations for using 4-poster deer treatment devices to manage *Ixodes scapularis* in Lyme disease-endemic communities

V.L. Hornbostel,¹ N.P. Connally,¹ A. Rowe,² N. Piedmonte,² A. Kaufman,² J. White,² B. Backenson,² J.I. Meek,³ S.A. Niesobecki,³ A.P. Hansen,³ L. Niccolai,³ C.C. Nawrocki,⁴ E. Foster,⁴ S.A. Hook,⁴ and A.F. Hinckley⁴

¹Department of Biology, Western Connecticut State University, Danbury, CT

²Bureau of Communicable Disease Control, New York State Department of Health, Albany, NY, USA

³Connecticut Emerging Infections Program, Yale School of Public Health, New Haven, CT

⁴Division of Vector-Borne Diseases, National Center for Emerging and Zoonotic Diseases, Centers for Disease Control and Prevention, Fort Collins, CO



BACKGROUND: 4-Poster deer treatment devices suppress *Ixodes scapularis*, the primary vector of Lyme disease. Feasibility and acceptability of using 4-posters for disease prevention in mainland, residential communities have not been well-documented.

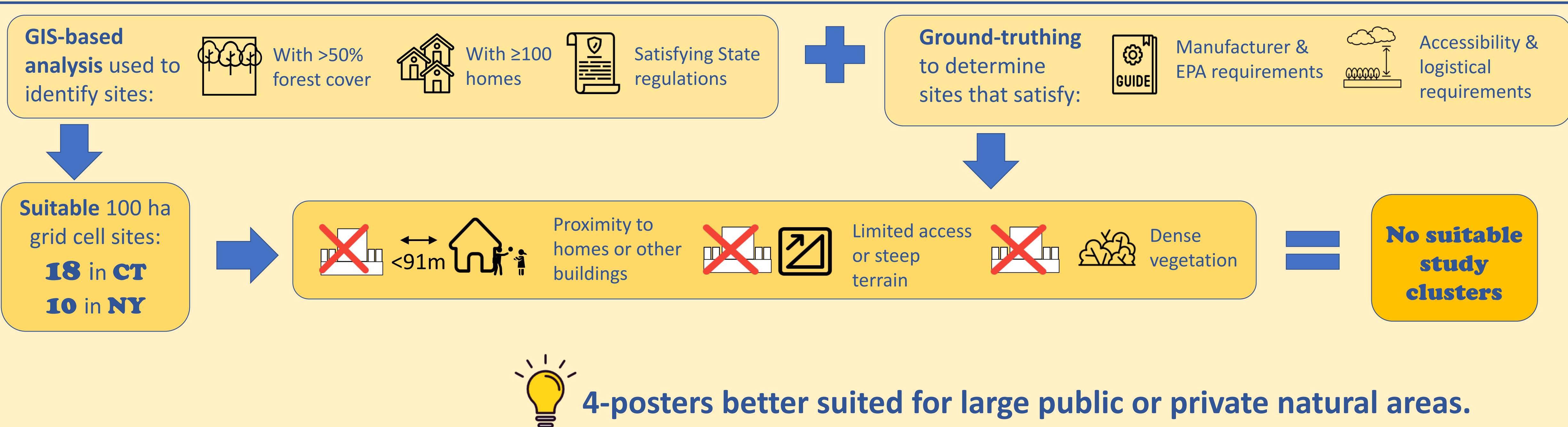
GOAL: To determine whether 4-posters can be placed in residential areas to potentially impact human outcomes.

Is high density placement feasible in residential settings?

Methods. Locate 80-100 ha sites in high Lyme disease-incidence residential areas of NY and CT for placement of clusters of 4 devices each.

Results. Most areas unsuitable for device clusters.

Conclusions. Device placement may be challenging at high density in residential settings.

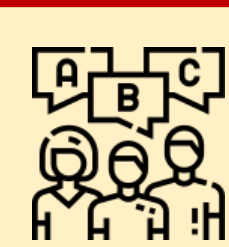


Are communities open to 4-poster use in residential areas?

Methods. Online survey to homeowners in NY and CT counties with high Lyme disease incidence.

Results. 1652 respondents (5.5% response rate).

Conclusions. Highest support for placement in neighborhood or community, not own property.



What are homeowner **attitudes** about 4-posters for community tick control? Who's **responsible** for tick control on private property?



Support 4-poster placement on:

90% public land in community

71% private land in community

37% own property



Reasons for **NOT** supporting 4-poster placement:



Weekly PCO visits



Safety concerns

Who's responsible for tick control on private properties?

61% property owners
37% local government



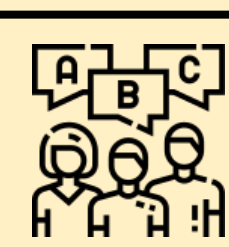
Target placement on large private/public natural areas in neighborhoods.

Are pest control operators open to 4-poster use?

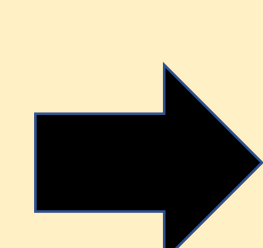
Methods. Online survey distributed to CT-licensed pest control operators (n=561).

Results. 91 respondents (16.2% response rate). Of these, 87 offering tick control services were asked:

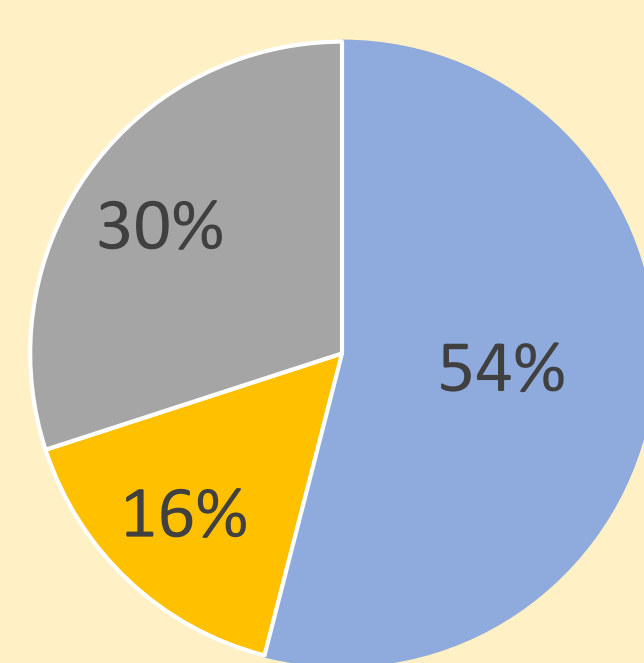
Conclusions: Data suggest majority of CT PCOs would consider offering 4-posters with additional information and training and if cost-effective.



What are knowledge and attitudes about 4-posters?



Would you offer 4-posters to your customers?



■ Not sure

■ Yes

■ No

Want to know more about device effectiveness, label restrictions, safety

Would not offer due to time commitment, logistics, costs



PCO cooperation likely with additional education and training.

What are the logistics of using 4-posters in a community setting?

Methods. 3 devices installed for 5 months on public golf course in Ridgefield, CT.

Results. 4-posters easy to use and stable, with few device challenges.

Conclusions. 4-posters can be deployed on large public property near residences, with wildlife monitoring and safety fencing.

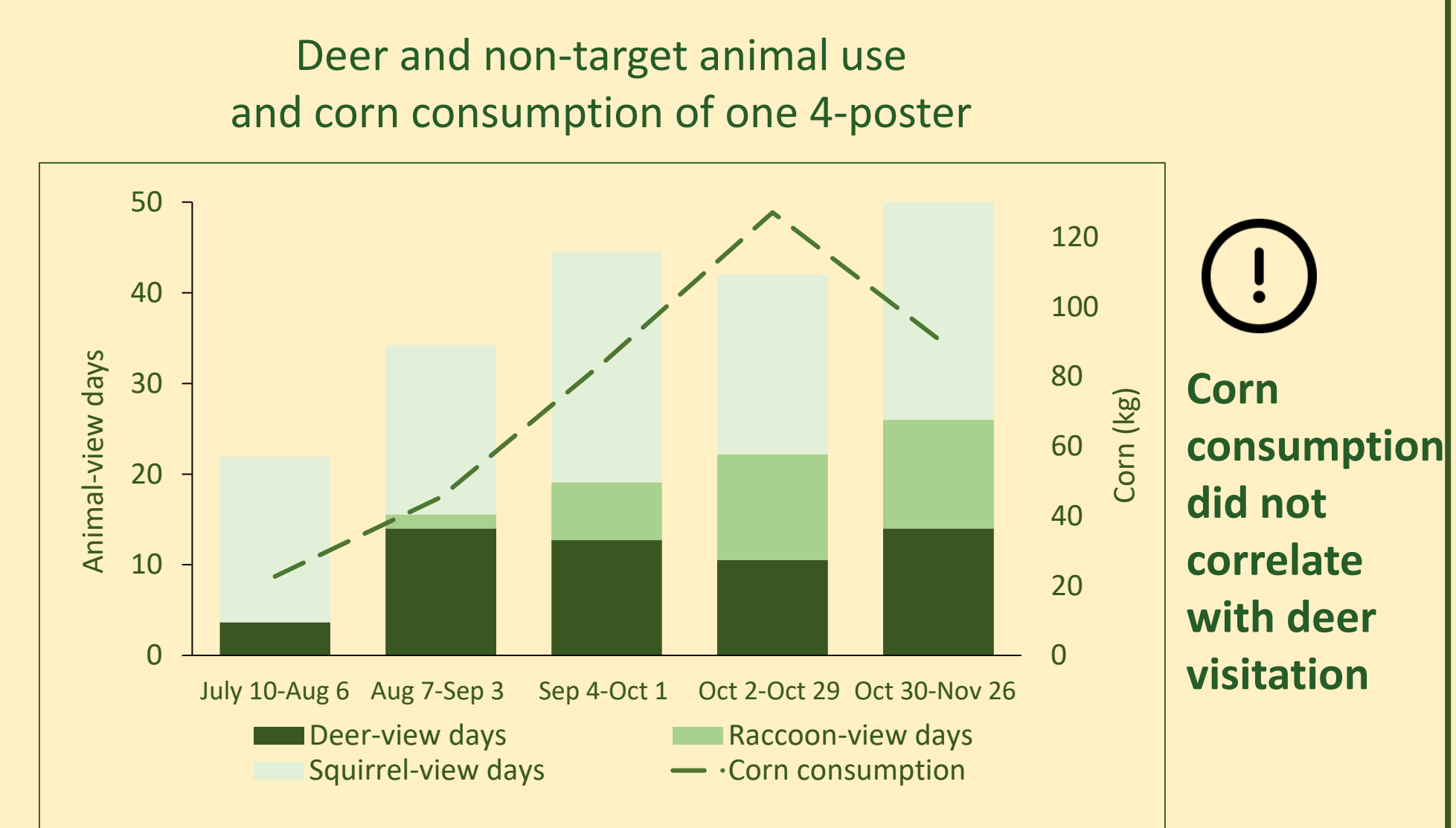


- Documented logistics
- Followed manufacturer and regulatory guidelines
- Monitored use with cameras



\$1280/month

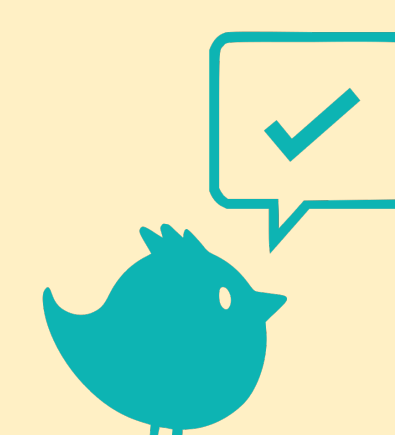
21 min weekly service/device



Target placement on large public/private properties in neighborhoods.

ACKNOWLEDGEMENTS

This work was supported by the Centers for Disease Control and Prevention, Emerging Infections Program via Cooperative Agreements U50CK000486 and U50CK000488. The findings and conclusions in this poster are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



REFERENCES

For a list of selected references
Scan QR code
Visit wcsuticklab.com/4-poster
Email hornbostelv@wcsu.edu