



Evaluating NJDA's Deer Fence Distribution

Highly effective non-lethal white-tailed deer exclusion sustaining farms

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For two decades, farmers identify intolerable, sometimes devastating, economic crop losses from white-tailed deer damage as a priority policy issue negatively impacting farming viability.

New Jersey suburban deer population densities frequently exceed our biological and our social carrying capacities. Deer are abundant near farms, but too often inaccessible to hunting due to our fractured landscape deer “refuges” and the differing values residents hold regarding wildlife. Contrary to popular belief, deer over abundance is not caused by suburban sprawl pushing deer onto farmers’ fields. White-tailed deer are thriving on the edge habitats created by lawns, wooded cover between homes, grassy road medians and shoulders, school grounds, etc. Our suburbanization creates more healthy deer habitat, not less. Excessive deer over-browsing damages forest ecology, parks, and other public and private land habitats in addition to farmers’ crops. Deer are a public resource, but not always accessible to management by the Division of Fish & Wildlife (landowners hold keys to wildlife management).

In response, the New Jersey Department of Agriculture (NJDA), cooperating with New Jersey Agricultural Experiment Station (NJAES), distributes deer fence to qualifying farmers, on a limited basis, as funds are available. NJDA offers limited deer fence to qualifying farmers as an acceptable, non-lethal exclusion tactic. Fence specified by Rutgers is provided free by NJDA. Farmers purchase poles and hardware, and provide all labor, which exceeds the value of fencing. Rutgers NJAES conducts farmer fence building training at our research farms with NJDA support for fence recipi-



High-tensile woven wire deer exclusion fence installation workshop conducted at NJAES Cream Ridge Research & Extension Center.

ents in order that the maximum performance and fence longevity for non-lethal exclusion of deer are realized.

Assisting NJDA and policy makers, NJAES evaluated fence performance, efficacy, and farmer recipient satisfaction with the NJDA fence program. Farmers receiving fence in 2005 (n=97) were surveyed. They rated ease of fencing installation and construction, non-lethal deer exclusion effectiveness, and overall satisfaction with the program. Responding farmers were encouraged to add comments and suggestions for future programs. Site visits (n=29) were conducted evaluating the quality of deer fence installations, and assessing effectiveness of fencing in reducing deer-related crop damage.

The following results highlight information ob-

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tained through surveys and on-site evaluations.

- Mail survey results indicated 93% of responding farmers experiencing deer-related crop damage prior to fencing installation reported significant reductions in damage the year following construction of the fence, with 60% of growers noting a total elimination of crop damage.

During the crop year *before* the 2005 fencing was installed around a selected field, 6% of farmers estimated *crop damage losses per acre* at less than \$1,000, 34% of farmers between \$1,000 and \$5,000, 26% between \$5,000 and \$10,000, 15% between \$10,000 and \$20,000, and 4% greater than \$20,000.

In the year *after* installation on the same fields, farmers estimated their cost per acre crop damage losses, with 60% reporting no damage loss, 25% reported less than \$1,000, and 6% estimated \$1,000 to \$5,000. No losses higher than \$5,000 per acre were reported.

- 70% of recipients fenced fields between 5-20 acres in size. 89% of respondents reported that if provided additional fencing, they would fence additional fields from 5 acres to more than 100 acres in size.
- 83% of fence went on farmer-owned land and only 7% on rented land. Crops were overwhelmingly high value fruits, vegetables, nursery crops, and flowers.
- Site visits revealed a similar pattern with 100% of growers reporting significant reductions in deer-related damage the following year and 52% of participants reporting total elimination of deer-related crop losses.
- 98% of fence recipients did not experience any conflicts with municipal zoning ordinances or regulations. The 2% of conflicts were related to questionable property lines.
- 83% and 87% of farmer recipients installed their own posts and fence, respectively, and the balance hired commercial contractors. 94% installed the fence according to manufacturer guidelines.
- For farmers installing their own fence, 74% obtained their “how-to install” information and skills from demonstrations performed at Rutgers NJAES research farms, 38% used the Rutgers Fact Sheet “High-Tensile Woven Wire Fences for Reducing Wildlife Damage,” 21% additionally relied on manufacturer’s



A properly installed “H-braced” corner and gate.

install guide, 13% used install experience from their Extension County Agent, previous experience, other farmers, the fence manufacturer, or fence distributor.

- Among the 87% installing their own fence, 42% installed 4,000 to 5,000 feet and estimated their labor input cost at 203 hours using 5 workers (results varied by feet installed).
- Farmer recipients estimated cash out-of-pocket expenses they paid to install their fence. 51% added \$1,000 to \$5,000, 28% added \$5,000 to \$10,000, 6% added \$10,000 to \$20,000, and 2% added more than \$20,000.

Farmers communicated satisfaction and ease applying to NJDA for fencing and fence pick-up. They were pleased the fence distribution program was available, and would like future fence distributions. Some farmers reported they lost use of farms and fields until fence was available, were unable to grow crops prior to receiving fencing, and could not afford to fence on their own. In the survey and during on-site evaluations, the major program criticism was the difficulty and added cost of obtaining line posts. Cost and availability of quality line poles, cost of installation and labor is daunting to smaller farm operators who would like more posts distributed. Some growers need far more linear feet of fence than the program currently provides, and a few farms in excessive deer population pressure areas need higher fence to successfully exclude deer.

A copy of the full survey, results, and farmer comments is available from the authors upon request.