Promoting Wildlife Pest Management Practices to Extension Clientele

Becky McPeake
Professor and Extension Wildlife Specialist

As part of the land grant institution, Extension's mission is to inform the public about science-based knowledge and solutions which benefit individuals and communities. One "measure of success" is the adoption of wildlife pest management practices. Yet another is helping them avoid investing in products which may not fulfill their needs.

When questions arose about a new systemic deer repellent, we conducted field demonstrations and detected little difference in damages compared to foliar or granular applications. *Photo credit: Becky McPeake*

Typically, when someone in a community has success with a particular practice, they extend your educational outreach by telling others who then try as well. Finding that initial person who will try a new practice and help spread the word sometimes can be challenging.

A literature review of bird control methods suggested that farmers were more likely adopt a practice if Extension provided specific information about the practice and its implementation, including its effectiveness and guidance. Factors which influenced their attempting a particular practice included:

1) cost;
2) fruit quality;
3) pest management effectiveness;
4) pest pressure;
5) timing in relation to timing of other farm activities;
6) simplicity of implementation; and
7) ease with integration into the ongoing farm schedule.

Findings also suggested those who were more willing to adopt conservation practices including pest management strategies were:

1) self-identify as being land stewards, leaders, and innovative;
2) reported positive environmental attitudes;
3) had previously adopted conservation practices;
4) had higher incomes and education;
5) marketed products which promote agricultural sustainability; and
6) expressed expectations of increased yields as a result of implementing practices.

As conveyers of science-based solutions, we also don't want to mislead anyone. Often with new wildlife practices and products, field testing and guidance may be lacking from sources other than the manufacturer. In these circumstances, it is important for Extension to conduct field demonstrations, ideally in partnership with an Extension specialist or area instructor, and at an Agricultural Experiment Station or with a partnering landowner. It's often better to learn about such

products in-house before going public. These demonstrations should be considered quasi-experimental and not research. Their value is gaining guidance when informing farmers or others, and noting to them that these demonstration results can vary.

An example is a deer and wild boar repellent called Penergetic which we tested several years ago at the Pine Tree Research Station. The Swiss manufacturer provided research indicating its effectiveness and recommended mixing their powder which contained zeolites with water (or spray agents or liquid manure) for spray applications around field borders. It was discovered that the spray nozzle size typically used for agricultural and home applications in the U.S. was too small resulting in clogged sprayers requiring multiple hours of cleaning. Subsequently, the manufacturer recommended a larger nozzle size as the solution. Potential adopters lost interest in the product, presumably because of the additional investment needed in purchasing, installing, and switching larger nozzles with little evidence of effectiveness.

The Cooperative Extension Service has a unique role in land grant institutions in reaching out and providing resources to help solve public needs. Pest management is important to many and requires care when promoting the adoption of products, technologies, and strategies. A better understanding of adopters and their needs can help with implementing sustainable pest management practices while reducing human-wildlife conflicts.

Source: Lindell, Catherine A. 2020. Supporting farmer adoption of sustainable bird management strategies. Human-Wildlife Interactions 14(3)-442-450.