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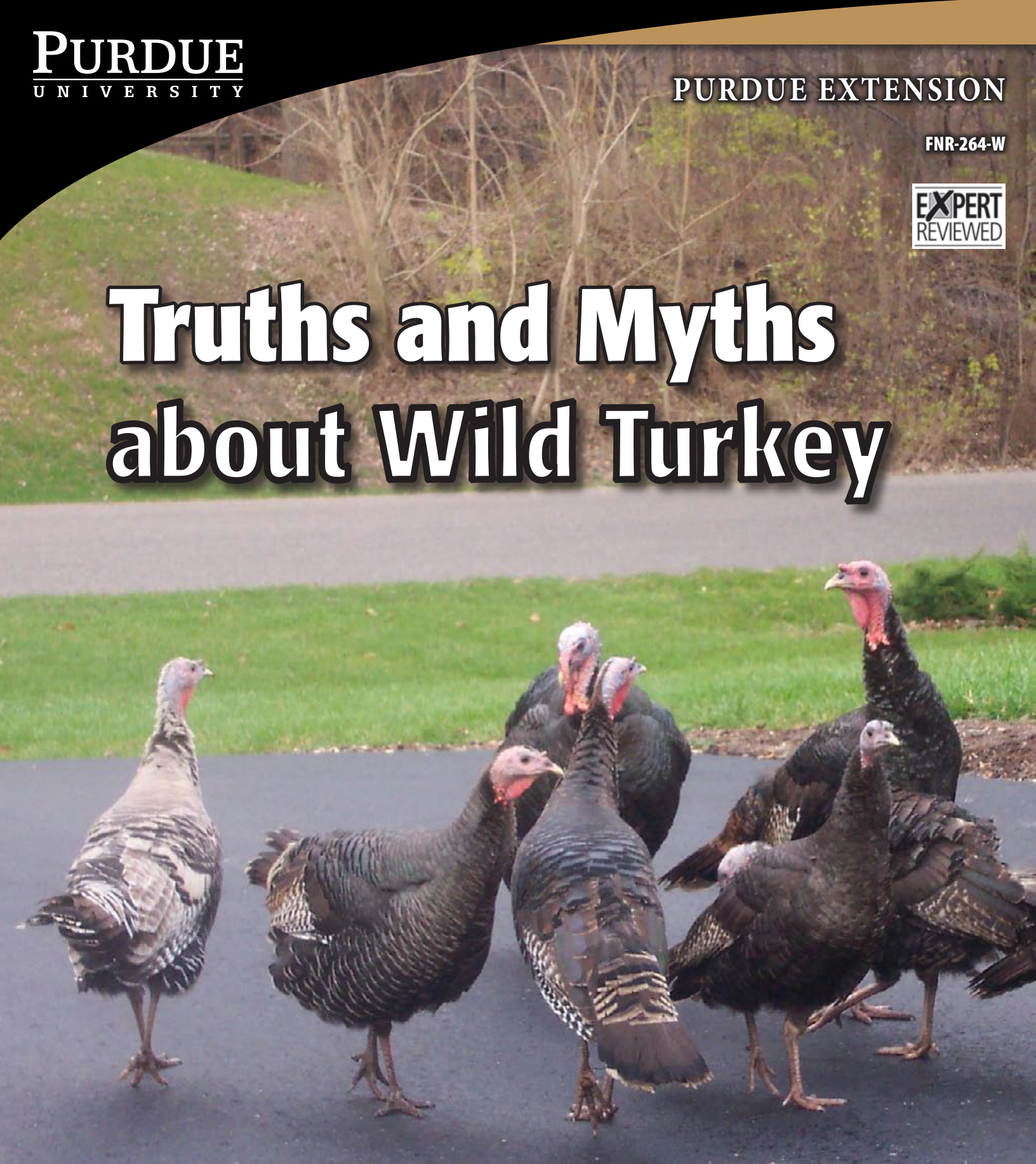
Truths and Myths about Wild Turkey



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History of Wild Turkey in Indiana

The wild turkey (*Meleagris gallopavo*) is a large game bird native to Indiana. The restoration of wild turkeys in North America is generally considered one of the greatest wildlife management successes of our time. Once extirpated like white-tailed deer (*Odocoileus virginianus*), wild turkeys have increased in numbers and distribution throughout Indiana, thanks to habitat restoration and management, and trap and transplanting programs. From 1956 to 2004, 185 releases totaling 2,795 wild turkeys were conducted in Indiana, with the majority of birds being restocked during the 1980s (Backs 1995, Backs 2004). Today, there are an estimated 125,000 wild turkey in Indiana, and spring harvest levels now exceed 10,000 birds annually (Figure 1).

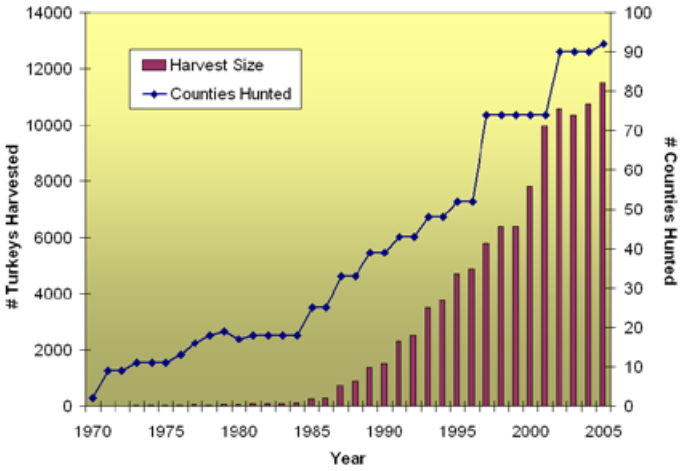

Figure 1. Annual spring wild turkey harvest in Indiana (1970-2005) (Source: IDNR, Division of Fish and Wildlife).

Turkeys and Agriculture

With the increased presence of wild turkey in agricultural regions, the number of perceived conflicts between wild turkey and agricultural producers over crop damage has increased (Payer and Craven 1995). While < 3 percent of producers in north central Indiana viewed turkeys as a nuisance, >20 percent were unsure or had mixed feelings about the presence of turkeys on their properties (Humberg et al. 2005; Figure 2). Although wild turkey may potentially damage agricultural crops, experts conducting research have found that most cases of crop depredation attributed to wild turkey resulted in minimal damage or actually were caused by other wildlife species (Gabrey et al. 1993, Paisley et al. 1996, Swanson et al. 2001, Tefft et al. 2005). In fact, while wildlife damage to harvestable field corn in 1993 was estimated at $11.6 million for Indiana (Wywialowski 1996); ≤ $10,000 of

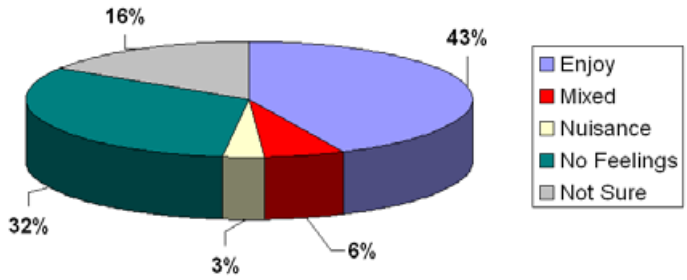

Figure 2. Landowners' general feelings about having wild turkey on their properties. Percentage of landowners for each category are given.

agricultural damage in Indiana has been attributed to wild turkeys each year (Tefft et al. 2005).

During the growing seasons of 2003 and 2004, researchers in the Purdue University Department of Forestry and Natural Resources assessed the amount and type of crop damage caused by vertebrate wildlife species in crop fields (corn and soybean) in north central Indiana. Field crews spent thousands of hours surveying corn and soybean fields for evidence of wildlife damage, and over 300 hours were spent observing and recording wildlife feeding behavior in corn and soybean fields (Figure 3). In addition, radio

Figure 3. In addition to surveying wildlife damage to 160 corn and soybean fields over two years (top), Purdue University researchers spent over 300 hours observing wildlife feeding behavior in corn and soybean fields (bottom).

transmitters were attached to 92 wild turkeys to allow researchers to track their daily and seasonal movements and habitat use (Figure 4). Wild turkeys in the study area spent most of their time in woodlands and non-agricultural areas (Humberg 2006). Despite the fact that over a half million incidences of wildlife crop damage were recorded during the course of the two growing seasons surveyed, wild turkeys did not cause

Figure 4. A total of 92 wild turkeys were captured with rocket nets and radio transmitters affixed to each. Wild turkeys were tracked throughout the study to assess daily and seasonal habitat use and movements.

any measurable damage to corn or soybeans (Humberg et al. 2005). However, in a separate investigation of crop damage to soybeans in southern Indiana, Purdue and Indiana Department of Natural Resources biologists did find anecdotal evidence of turkey damage to recently emerged soybeans on a limited basis (Figure 5).

Because of their high visibility in the landscape and widespread use of crop fields, wild turkeys often may be held responsible for crop damage that they did not

Figure 5. In a separate investigation of crop damage to soybeans in southern Indiana, Purdue and Indiana Department of Natural Resources biologists did find anecdotal evidence of turkey damage to recently emerged soybeans on a limited basis. Estimated annual damage caused by wild turkey in Indiana is ≤$10,000 (Tefft et al. 2005). Overall wildlife damage to harvestable field corn in Indiana was estimated at $1.8 billion in 1993 (Wywialowski 1996).

create. The common yet often incorrect assumption that crop damage has been caused by wild turkey most likely stems from their daytime activity and their coincidental presence in fields already damaged by other wildlife species. On the other hand, wildlife species such as deer and raccoon, which have been demonstrated to cause the vast majority of damage to corn and soybean crops in northern Indiana, feed at night when they cannot be seen and may be overlooked as culprits when turkeys are readily visible in fields (Humberg et al. 2005). An additional factor that contributes to the perception that turkeys are actively damaging crops is their attraction to bugs as a high-quality food item. For example, July is a peak time for complaints about turkeys and soybean damage in Indiana, a period that coincides with Japanese beetle outbreaks in soybean fields (Figure 6). Squirrels and mice are difficult to observe feeding and leave less conspicuous signs of their presence than do species such as turkey, deer, and raccoon.

Consumption of corn by wild turkey is primarily limited to waste grain during the winter and spring (Figure 7). Wild turkeys often feed on exposed ears or waste grain on the ground after damage by other wildlife species has taken place (Figure 8). Most of the corn-related damage attributed to wild turkey has been limited to stored silage pits or corn bins in areas in the

Figure 6. Wild turkeys readily feed on Japanese beetles during outbreaks in July of each year.

Figure 7. Waste grain (soybeans) collected from the crop of a wild turkey harvested in the spring.

Figure 8. Damage to corn late in the growing season by raccoons and other wildlife species makes kernels available to wild turkeys.

northern part of its range. Specific yield loss caused by wild turkeys feeding in these areas depends on local turkey population density and the availability of alternate food sources (Tefft et al. 2005).

Turkeys in Human Landscapes

Complaints about wild turkey in urban areas have increased in recent years. Wild turkeys are now commonly observed in developed areas and towns, especially those located in more rural landscapes within prime turkey range. During parts of the year, turkeys may spend time on or around residential lawns and other human manicured landscapes. Wild turkeys have been observed dusting in dirt areas of baseball fields and feeding on insects found in the grass associated with residential, athletic, and commercial properties. Interestingly, turf damage caused by raccoons and skunks digging up grubs is often falsely attributed to wild turkey (Figure 9). Although wild

Figure 9. Grubs cause damage to lawns and turf during the late summer (top). Raccoons and skunks damage the turf by digging up grubs (bottom).

turkeys do not have a well-developed sense of smell, they and other wildlife naturally will be attracted to browned, turned over areas of earth that previously have been damaged by raccoons and/or skunks. Turkeys are much less likely to scratch up undisturbed turf, but would be highly visible feeding upon the grubs made available by other animals (Figure 9).

Hybridization between free-ranging wild turkeys and domestic or "pen-raised" turkeys is a concern in many areas and survival of escaped, pen-raised or hybrid turkeys often is enhanced by supplemental care (e.g., feeding) from the public. Many human-turkey interactions in which turkeys were confirmed to be a nuisance have involved pen-raised or hybrid birds – not wild turkeys (Figure 10). Hybrid turkeys generally retain some of the physical (e.g., large body size) and behavioral (e.g., aggressiveness) traits of domestic turkeys and generally have minimal fear of people (i.e., they are approachable) (Figure 11). True wild turkeys are very wary of people and will flee when approached. Even those flocks of wild turkeys that utilize habitats on the outskirts of town and are used to seeing people will generally flee from people who approach them. Turkey biologists throughout the country are concerned with the presence of escaped pen-raised turkeys and their hybrids due to issues such as increasing numbers of nuisance birds, the spread of disease from domestic flocks to wild turkey populations and the loss of genetic integrity of wild turkey stocks through hybridization.

Figure 10. Pen raised or hybrid wild turkeys can be a nuisance around homes and businesses. Turkey biologists are concerned with escaped pen-raised turkeys spreading disease to wild turkey and loss of genetic integrity in the wild stock.

Figure 11. Pen-raised or hybrid wild turkeys are differentiated from pure wild turkeys by their appearance and behavior. True wild turkeys are not approachable by people.

Summary

Ben Franklin's choice for our nation's bird, the wild turkey, is a valued part of our landscape and heritage. Although wild turkeys are readily observed feeding in crop fields and may be assumed to have caused damage directly to agricultural crops, research indicates that they are most likely consuming insects and waste grain and that what damage is done to crops or grain stores by wild turkeys is generally minimal or negligible to yield.

To learn more about how to identify culprits of wildlife damage and about crop damage by wildlife in the Midwest, see the resources listed below. These resources and more can be found at www.purdue.edu/cropdamage.

FNR 267 Identification of Wildlife Crop Depredation

FNR 265-W Corn and Soybean Crop Depredation by Wildlife

DVD-FNR 266 Wildlife CSI: Unraveling the Mysteries of Wildlife Crop Damage

For all of your wildlife needs, visit "Everything **WILD**life" at www.purdue.edu/wildlife.

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Acknowledgements

The authors sincerely and deeply thank the dozens of landowners who allowed research crews access to their crop fields. We thank Steve Backs and Bruce Plowman for reviewing previous drafts of this publication. Their thoughtful comments improved its quality. Linda Lawson gave us invaluable advice and assistance designing the mail survey and associated data analysis. We would like to acknowledge Steve Backs, Jim Mitchell, Brian Miller, Dean Zimmerman, Tom Hewitt, Gary Langell, Ed Theroff, and John Olson for their advice and assistance with various aspects of this project. We also thank Dave Glista, Mara Lavelle, Guha Dharmarajan, Matt Robles, Wayne Oles, Sara Hansen, Blaine Beehler, Tim Van Kleek, Jerry Stevens, Karin Bailey, Aaron Hawkins, Bill Graser, Jacob Ringell, Eric Kellaher, Kristen Paullus, and Anna Sweeten for their assistance in collecting field data. Thanks to the numerous state biologists and conservation officers from Indiana for their assistance in trapping and with public relations.

Funding for this publication was made possible by the following:

Indiana Department of Natural Resources, Division of Fish and Wildlife

http://www.in.gov/dnr

Indiana Chapter of the National Wild Turkey Federation, and the National Wild Turkey Federation

http://www.nwtf.org

Purdue University, Department of Forestry and Natural Resources.

http://www.agriculture.purdue.edu/fnr/

Activities associated with this project involving the handling and care of vertebrate animals were approved by the Purdue Animal Care and Use Committee (PACUC 01-078, PACUC 01-080, and PACUC 01-079)

www.purdue.edu/research/vpr/compliance/animals/index.shtml

Activities involving the use of human subjects were approved by the Purdue University Committee on The Use of Human Research Subjects (Reference number 02-124E).

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