



Economics of Black Vultures & Management Options for Illinois Livestock



Economic Impact of Black Vultures & Management Options for Illinois Livestock



Agricultural operations often have to find new and effective solutions to managing interactions with wildlife. Farmers seek solutions that protect their operations and economic viability while not degrading their environments. In recent years, incidents with black vultures have increased in Illinois, particularly in the southern portion of the state, but with expanded frequency further north. The increased presence of black vultures in Illinois has created numerous issues for livestock producers in particular, and requires solutions to manage their presence.

The following report will present potential economic impacts of black vultures to livestock producers as well as a comprehensive overview of management solutions.

Black Vulture Background

Vultures play an important role in ecosystems across the country by eating dead animals and effectively removing diseases from landscapes (AGFC, 2024). Illinois is home to two different vulture species – turkey vultures and black vultures (Figure 1). Turkey vultures, known by their large size and red heads, are considered less aggressive, primarily focusing on finding carrion rather than predatory behavior.

Black vultures should not be confused with turkey vultures. Unlike turkey vultures, black vultures are known by their dark gray head, smaller size, and markedly more aggressive nature. Large groups of black vultures are known to damage property, including tearing window caulking and shingles, scratching vehicle paint, and inflicting other structural issues. Due to their aggressive nature and tendency to congregate, black vultures have been known to attack and kill livestock, targeting birthing animals, young animals, and other small or weak animals.



Figure 1. The turkey vulture (*left*) is the larger of the two species, weighing about 4 pounds with a 6-foot wingspan. The adult's featherless, bright red head is distinctive. The black vulture (*right*) weighs less than 4 pounds with a wingspan of less than 5 feet. It is mostly black.

Illinois Livestock Industry Highlights

Livestock production remains an important component of Illinois' agricultural economy, representing over \$7.8 billion in total value added and 69,000 jobs across production, processing and other related industries. Beef production represents numerous direct and indirect inputs including feeding, vetting, breeding, marketing, and many others. The investments that producers make not only contribute to a robust agricultural industry, but also represent significant interest by individual producers to preserve healthy and productive herds.

Recent periods of market volatility have been felt across the agricultural industry, including in livestock production. COVID-19 induced constraints labor led to plummeting relative slaughter rates. Combined with a surge in retail demand, this drove an unprecedented gap between wholesale meat and livestock prices. As processing capacity returned to relatively normal levels, prices fell (USDA, 2022). Though prices eventually stabilized, they have remained inconsistent as the market has rebounded. In the same period, historically high input prices, including on feed, transportation, and building costs, have led to increasingly tight margins for producers (USDA, 2022; Zwilling, 2024).

Across the agricultural industry, periods of market volatility have emphasized the need for carefully managing inputs and risks on a per-farm basis in order to preserve profitability. As it relates to Illinois livestock production, increased incidents of black vulture attacks on livestock raise additional concerns about profitability of affected herds as well as questions about potential risks for neighboring herds. For the purposes of this publication, beef has been highlighted due to data availability, however, black vultures have been known to attack other species such as dairy cattle, swine, sheep, and others.

Potential Impacts of Black Vultures and Management Options

The actual impact of black vultures on livestock operations can be challenging to quantify. Some estimates suggest that conflicts between black vultures and livestock have multiplied by 100-fold between the 1990s and 2010s, but it can be hard to discern if an animal was in good health before an attack happened, or if vultures had targeted unhealthy animals (Learn, 2022). Black vultures may also be hard to identify, so may be blamed for losses that are due to other causes (Quinby et al., 2023). Regardless of the accuracy in reporting, there is certainty that black vulture conflicts are likely to increase as they expand their territory (Learn, 2022; Quinby et al., 2022), therefore necessitating the need to understand the potential economic impacts for livestock and management solutions.

There are multiple considerations when it comes to quantifying potential impacts of black vulture attacks on livestock. The most obvious direct cost is the loss of livestock. When it comes to beef cattle, the majority of attacks are on birthing cows and calves, or sick calves. Most calves that are attacked by black vultures, do not survive. Depending on the nature of the conflict, cows that are present may also succumb to injuries. Black vultures that have successfully attacked animals are more likely to remain in the area, so the likelihood of future attacks and losses may increase.

In any case, estimates of economic damage are typically quantified per head or by hundredweight (CWT) based on the fair market value of the animals by type (e.g., beef) and by weight. The Livestock Indemnity Program (LIP), for example, issues payments for livestock deaths based on their type and weight, paying up to 75 of the average fair market value of livestock. However, many of these estimates often leave out additional direct costs, such as costs associated with cows that require veterinarian intervention due to the extent of their injuries. These estimates also do not consider indirect costs that may come from increased presence of vultures, or the future end market value of any calves that are lost.

The economics of management options are also important to consider. In any situation, it is recommended to utilize a combination of deterrent options, as well as depredation if black vultures are present and have known conflicts with livestock. All depredation and deterrent options come with variable upfront costs, both direct and indirect, as well as several potential outcomes. The size of the area and livestock herds needs to be considered before employing any management strategies.

Appendix A (pages 6-7) was developed to outline direct and indirect costs, as well as other potential outcomes for several deterrent and depredation options. Deterrent practices typically involve making an area unappealing to black vultures. These types of management scenarios do not violate MBTA “take” provisions, as long as they do not directly harm or destroy a black vulture or active nest. In general, deterrent practices like rotational grazing, bringing animals closer to buildings, and removing potential roosting areas are considered “basic” first steps in preventing vulture presence and often incur minimal costs. Other deterrent options like livestock guardian dogs, harassment systems, and use of effigies may incur more direct costs and may require expertise to utilize effectively. Depredation solutions, though more limited, incur variable costs based on whether a federal or state permit is pursued. Depredation can also involve significant time associated with bird disposal, record keeping, and application maintenance.



Figure 2. Fencing, buildings, and overgrowth may all attract black vultures to roost near livestock. Removing these areas or making them less hospitable is often the first step to deterring black vultures. (Photo by Mills, D. 2018)

Illinois Black Vulture Depredation Permits

Because of MBTA protections on black vultures, they cannot be killed or destroyed without a migratory bird depredation permit. These types of permits can be issued from United States Fish and Wildlife Services (USFWS) or through a sub-permit process. Migratory bird depredation permits typically allow applicants to take up to three black vultures or active nests and come with record maintenance and bird disposal requirements. MBTA violations can incur significant penalties, including fines, jail time and seizure of property, making depredation permits an important tool to manage black vulture populations and reinforce the effectiveness of non-lethal deterrents.

As demonstrated in Appendix A, federal permits come with direct costs of \$100 per permit application and \$50 per permit amendment. Typically, undergoing a consultation with United States Department of Agriculture (USDA) Wildlife Services staff is needed to discuss any mitigation options or help complete the evaluation form to describe damages. Completing a federal permit often takes considerable amount of time for applicants, including any requests for renewing the permit from year-to-year.

The permit program offered by Illinois Farm Bureau (IFB) operates as a federal sub-permit or a Class B nuisance wildlife permit. IFB functions as the principal contact for the statewide permit and works with Illinois Department of Natural Resources (IDNR) to issue sub-permits to eligible applicants. These permits come with no cost to the applicant and reduced time spent on the application and renewal requests for individual applicants.

The Illinois black vulture depredation permit program has operated since 2022. Over 35 sub-permits have been issued since the original statewide permit was approved, saving producers over \$3,500 in application fees alone. Because IFB serves as the principal contact for the statewide permit, they also often work as an intermediary between USDA wildlife services, USFWS, and IDNR, which offers an additional benefit to individual producers.

Conclusion

Black vultures have the potential to significantly impact the bottom line of livestock operations in a growing stretch of Illinois. Having a variety of management solutions plays an important role in protecting Illinois' livestock, while continuing to support natural resources. Managing black vultures requires a toolbox of deterrent options, as well as depredation solutions.

References

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- United States Department of Agriculture (USDA). 2022. COVID-19 and the U.S. Meat and Poultry Supply Chains.
- United States Department of Agriculture (USDA). 2022. Livestock, Dairy, and Poultry Outlook: July 2022.
- Zwilling, B. (2024). Costs and Returns for Illinois Beef Producers in 2023. *farmdoc daily* (14):116.

Appendix 1. Costs & Outcomes of Depredation & Deterrent Scenarios

Black Vulture Depredation & Deterrent Scenarios						
		Upfront Costs		Potential Outcomes & Costs		Other
		Direct	Indirect	Direct	Indirect	
No depredation or deterrent methods used		--	--	• Est. loss per cow¹ = \$189.35 cwt • Est. loss per calf¹ = \$ 201.22 cwt • Vet est.² = \$50-100 for farm call, plus costs for services	• Increased vulnerability for existing herd post-attack • Induced losses of future income	• Lowest upfront costs assuming no loss takes place • High risk potential short-term and long-term
USDA Livestock Indemnity Program (LIP)		--	• Time for application, providing evidence of attack	• Compensation rate is based on national payment rates (75% of avg. market value) • Owner incurs any difference	• Solely a loss management scenario - when used without any additional scenarios, risk remains high	• Program is only eligible for commercial livestock – other animals on operation may not be covered
Depredation Scenarios:						
a	U.S. FWS Permit	• \$100 permit application • \$50 permit amendment	• Time for application • Cost of depredation	• Typically, authorized for take of up to 3 birds or active nests	• Time associated with record maintenance • Time associated with bird disposal	• Individual is principal contact – all responsibilities of applying, maintaining records, and renewal fall on individual
b	Illinois Permit	• \$0 for permit	• Reduced time • Cost of depredation	• Typically, authorized for take of up to 3 birds or active nests	• Reduced record maintenance time – IFB manages reports to USFWS or USDA • Time associated with bird disposal	• IFB is principal contact, individual is sub-permittee • Increased accuracy of permit and monitoring of renewal application deadlines
c	Take or damage a nest without a permit	• Migratory Bird Act (MBTA) violation	• May be charged with misdemeanor and/or felony offense	• Misdemeanor fines = maximum \$5,000 • Felony fines = maximum \$250,000	• Misdemeanor imprisonment up to six months • Felony imprisonment up to two years	• MBTA violations also come with federal search and seizure provisions, which may lead to all guns, nets, traps, vehicles and other equipment being forfeited to the U.S. Secretary of Interior

Appendix 1. (Continued)

Deterrent Scenarios:						
a	Lasers or light systems	- Range = \$300-\$4,000+ per device ○ Avg³ = \$500+	- Costs, time for installation - Costs of power	- No permit needed - May disturb livestock - May be hazard for low-flying aircraft	Long-term labor and time intensive – best when used with other deterrents. Constant harassment needed	- Seems to work well for disturbing vultures that are not established or roosting - Method may not work on larger/grazing operations if cattle are spread out
b	Anti-perching spikes	- Range = \$20/10 ft. (plastic) - \$40/22.5 in. (steel) ○ Avg³ = \$7.60/ft.	Costs, time for installation	- No permit needed - Removing roosting areas keeps vultures away – may lower costs in other areas	- Requires updates depending on materials - May deter other perching/roosting species that can repel vultures (e.g., crows, hawks, owls)	- Other anti-perching options include electric tracks, rollers, wire, etc. - Only works if roosting areas are known/accessible. May not be feasible for operations with extensive trees or fencing - May work if building damage is a concern
c	Removing shrubs, overgrowth	Minimal	- Potential for being time, labor intensive - Access to equipment may be needed	- No permit needed - Best option to limit roosting and nesting areas – may lower costs in other areas	Regular maintenance may be needed	Works best as preventative measure – if vultures are already present, may take time to see full benefit
d	Effigies	Minimal, but assumes permit or purchase of a replica	- Preparation or taxidermy costs if using actual carcass - Labor, time needed to place	Permit may be needed if using actual carcass	- May draw rodents, other birds if using fresh carcass - Additional may be needed depending on weather and other conditions	- Has been shown to work well for dispersing groups and deterring new vultures - One of few options that can work in wooded areas - Requires access to known roosting or nesting sites to be effective

¹ Cattle loss estimates based on Illinois livestock auction prices from Oct. 22 – Nov. 14, 2024 (USDA-AMS). Cow estimate assumes the value of an equivalent replacement or slaughter cow. Calf estimate assumes the future value of feeder, replacement, or slaughter cattle at their time of sale.

² Vet visit estimates based on survey of farm vets with emergency visits, which typically include a base “call” fee, plus additional cost for services and mileage.

³ Cost estimates calculated based on 25 randomly selected systems.

Additional Resources & Contact Information

Illinois Farm Bureau

For information regarding sub-permits for limited take of black vultures free of charge to producers, please contact:

Tasha Bunting | tbunting@ilfb.org | 309-557-2993

United States Department of Agriculture

Animal and Plant Health Inspection Service | Wildlife Services

For more information about managing vulture damage, or other Wildlife Services Operations, call your State office at 866-4USDA-WS (866-487-3297) or visit www.aphis.usda.gov/wildlife-damage

United States Department of Agriculture

Farm Service Agency (FSA)

Learn more about the Livestock Indemnity Program (LIP) at your local FSA office or visit www.fsa.usda.gov/programs-and-services/disaster-assistance-program/livestock-indemnity

U.S. Fish & Wildlife Service | Migratory Bird Permit Office

For more information on black vultures, migratory bird depredation permits, or the U.S. Fish and Wildlife Service operations visit: www.fws.gov/program/migratory-bird-permits

