Edge Feathering for Wildlife Benefit

By Sean Bowers

Spring has sprung, and many are ready to get out on their property to continue their forest and wildlife management. One often overlooked aspect of wildlife management is the edge. The edge is the zone where two or more different habitat types intersect. Enhancing and expanding this area using a technique called ‘edge feathering’ can be highly beneficial for wildlife. Edge feathering is simple and easy to implement; all you will need is a chainsaw (or handsaw if you’re feeling brave), herbicide, and a solid plan of action.

With human impacts and fragmentation of landscape use, the transitional edge has been largely overlooked or removed as a habitat type. Fencerows overgrown with shrubs and grasses were common in the agricultural/rural landscape and provided large amounts of transitional edge habitat. However, with the advent of better equipment and herbicides, there is rarely a transitional zone left between an agricultural field/grassland and forestland. There is just an abrupt change in structure and vegetation types, known as a hard edge. Hard edge zones lack the essential components of intermediate stand structure and cannot provide any protective escape cover or plant species diversity that wildlife depends on.

So why improve edge? Proper forest management is not just about growing timber. Forests managed for overall ecosystem health display greater resiliency to pests, faster recovery from disturbance events, provide recreational/aesthetic services, and support robust wildlife populations. Edge feathering allows landowners to manage their wildlife habitat, stand regeneration, and general ecosystem health.

The first step to edge feathering is to evaluate the current composition of the edge, noting species present, invasive plants present, topography, land use (current and historical), etc. You will need to focus on managing a strip of land at a minimum of 30 feet up to 100 feet in width for proper feathering. This strip provides enough space to form a transitional zone that gradually changes from an open area to forested cover. A professional forester can assist you with this evaluation and advise you on how to best proceed regarding the site’s specific needs.

You can utilize several management techniques to increase the amount of gradual edge on your property. Generally, edge feathering focuses on trees less than 6-8 inches in diameter at breast height (DBH), which is a measurement taken 4.5 feet above the ground. When cutting the less desirable trees, apply herbicide to the cut stump to prevent resprouting. Always follow all label directions when using herbicide. The label is the law! The felling of less desirable tree species allows more sunlight to reach the ground and increases understory diversity. Leaving the cut trunks creates snags and insect habitat within the feathered edge. Mast-producing species, such as oaks or hickories, should be left in the overstory unless they are of inferior form or vigor. Reduction of tree cover should be greater towards the more open habitat and lesser towards the mature forest stand. The reduction gradient allows for a wide variation of stand structure and species composition in a relatively small area with a gradual transition to a mature forest.

Once trees in the area are felled, native shrubs, forbs, and grasses can be planted to accelerate these species’ natural regeneration. Planting allows for greater control of species composition within the edge rather than relying on the seed bank. Use native plants to discourage fast-growing invasive species. Some maintenance of these plantings may be needed, such as tree tubes or exclusion fencing, to allow these plants to establish in the area without vulnerability to heavy browse pressure from wildlife. Follow-up cuts and tree removals may be needed every 3-5 years to maintain herbaceous annuals on the site, as canopy closure will remove the available sunlight that these plants need to flourish.

Hinge cutting is a technique where smaller (<6-8 inches DBH) understory and midstory trees are felled using only a back cut. Using this technique allows a portion of the tree’s cambium layer (nutrient and water transporting tissue) to stay intact and causes dense lateral sprouts on the stem providing excellent browse for herbivores and increased...
cover for wildlife. Hinge cuts also help manage regeneration in a forest stand by protecting delicate seedlings from browse pressure with dense cover. Hinge cutting is best performed during the dormant season to avoid insect pests and further stress on the cut trees. A common mistake with hinge cutting is felling the trees into a thick, overlapping brush pile. While this pile will sprout, the pile’s density can exclude sunlight from the ground below, essentially creating another forest canopy and not allowing for increased species diversity.

Bobwhite quail benefit tremendously from edge feathering activities. Bobwhites are a species requiring early-successional habitat of grasslands and brushy-shrubby areas. The soft edge provides escape cover, nesting habitat, and more readily available food sources. In areas with exclusively hard edges, quail are highly susceptible to predation, more easily affected by weather, and lack food by reduced insect populations. With the addition of dense shrubs, grasses, and forbs, the quail can shelter from predators and have thermal cover during summer months. The added native plants also provide a veritable buffet of insects for the covey.

Deer also greatly benefit from the creation of an edge in their environment. Edge feathering activities allow more sunlight to reach the forest floor, encouraging forb species to sprout, providing excellent browse and readily available protein. The increase in forbs can reduce damage from deer browse to recently planted food plots or agricultural fields. Hinge cutting can be used to create alleyways or paths that funnel deer to or away from certain areas while also providing more readily available browse from the lateral sprouts.

Edge feathering is a simple management tool that has a quick turnaround on its ecological benefits. This technique is relatively cheap and easy to maintain, benefiting both game and non-game species. Having a management plan is an invaluable tool for setting goals and objectives that work best for one’s property, and edge feathering can be part of your toolbox. All methods of installing a soft edge have their unique benefits and drawbacks; consult a forester or your local extension agent to find out more about what will work best for you.

The image on the left shows a typical woodland edge (hard edge), while the figure on the right displays a feathering operation (soft edge). Image adapted from University of Purdue College of Agriculture, 2018. [Link](https://ag.purdue.edu/arge/pac/Documents/sepac/Edge%20Feathering%20SEPAC%20Jan%202018.pdf)

Plant Succession from a fallow crop to a mature forest. Image adapted from University of Missouri Extension - [Link](https://extension.missouri.edu/mp907?p=2)

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