



# FIELD MANAGEMENT GUIDELINES

## for Virginia's Grassland & Shrubland Birds

Updated: April 2021

*This guide is intended for landowners who are interested in helping grassland birds and have some flexibility in their management approaches. Even just choosing to implement one of the practices listed below can have a positive impact. The information in this handout is based off nearly a decade of Virginia Working Landscapes grassland research, which aims to use science to inform best management practices for biodiversity conservation. To learn more about our research, visit: [www.vaworkinglandscapes.org](http://www.vaworkinglandscapes.org)*

Grassland and shrubland birds are declining more than any other group of birds. These declines have been attributed to anthropogenic causes such as agricultural intensification, habitat loss/ fragmentation and pesticide use, and are increasingly exacerbated by the effects of climate change. Farmlands and associated grasslands (i.e., cropland, livestock pasture) in Virginia are one of the most understudied ecosystems in the state. However, these working grasslands are home to some of our nation's most threatened species of birds throughout the year. With over 80% of Virginia's grasslands currently held in private hands, the survival and well-being of these vulnerable species depends entirely on the decisions made by private landowners.

## WHAT CAN YOU DO?

- 1. If possible, delay field maintenance until mid-July.** If circumstances require you to cut earlier, try to do so by late-May and wait at least 65 days before the next cut. Although this first cut will undoubtedly disturb nesting birds, it is early enough in the season that they will likely re-nest. Waiting the 65 day period will allow most species to successfully fledge at least one clutch of young.<sup>2,3,6</sup>
- 2. If you have fallow fields that are managed once annually,** the optimal time of year to bush-hog is Feb 15—Apr 1. This leaves ample cover for overwintering birds (and arthropods!).
- 3.** If circumstances require you to mow during the breeding season, **focus on smaller fields first and work your way up to larger fields.** Larger fields (>30 acres) have a higher density of grassland nesting birds.<sup>6,4</sup>
- 4. Manage fields in patches** (i.e. Burn or cut 1/3 of field per year) to leave varying structure and cover for birds year-round.<sup>2</sup>
- 5. Incorporate native grasses, forbs and legumes into your fields** to provide foraging opportunities and protective cover.<sup>1,2,6</sup>
- 6. Promote connectivity of grasslands** between neighboring farms. Large expanses of connected grasslands are the most important for many of our grassland obligates.<sup>2,6</sup>
- 7. Follow low intensity or rotational grazing practices,** as this improves insect availability and provides favorable foraging conditions for grassland birds. Rotational grazing also encourages regeneration of soils and vegetation.<sup>2,4</sup>
- 8. Modify cutting speed and pattern** by mowing your field slowly in a spiraling motion from the inside of the field outwards. This allows the birds time and space to escape. Avoid mowing at night.<sup>1,2,6</sup>
- 9. Increase cutting height** to a minimum of 6-8 inches. This not only leaves protective cover for nesting grassland birds and their fledglings but also helps promote healthy root systems and soil health.<sup>1</sup>
- 10. Attach flushing bars** to the front of your tractor (dangling chains) to flush young birds in your mower's path.<sup>2,3</sup>
- 11. Hang nest boxes** for cavity-nesting species like American Kestrels, Barn Owls, and Eastern Bluebirds.<sup>5</sup>

\*For references and citations, visit <https://www.vaworkinglandscapes.org/education/resources/field-management-guidelines-for-grassland-birds/>



Eastern Meadowlark



American Kestrel



Eastern Bluebird



Bobolink



Field Sparrow



Northern Bobwhite Quail



Loggerhead Shrike



Common Yellowthroat



Red-winged Blackbird



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# Field Management Risk Calendar for Grassland Birds

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Bobolink

## Green Zone

**Management season:** optimal time for field management, especially if field is only managed once per year.

## Red Zone

**Peak Breeding season:** includes peak nesting period for many grassland species resulting of >90% mortality of nestlings if mowed during this time.



## Yellow Zone

**Conservation season:** includes early season growth of vegetation for breeding birds and maintenance of vegetation structure for overwintering birds.



Eastern Meadowlark

Illustrations by Olivia Cosby

## Dark Orange Zone

**Extended Breeding season:** includes timeframe for early- (e.g. Eastern Meadowlarks) or late-season nesters (e.g. American Goldfinches).

## Light Orange Zone

**Active season:** includes timeframe when birds are using fields as stopover sites and fueling up for migration.

**\*Late season hay** can be used for bedding hay, fodder for mature livestock, or mulch. Some benefits of late-season hay harvesting include the protection of fledglings and nesting site habitat for rare grassland bird species and shorter hay drying times.

## What species can we expect in Virginia's grasslands, and when?

Habitat associations based off of data collected from Virginia Working Landscapes' annual grassland bird surveys

| Species                 | Present in VA | Habitat Association  |
|-------------------------|---------------|--|
| American Kestrel        | Year-round    | Open grassland habitats including meadows, pastures and hayfields  |
| Bobolink                | Spring/Summer | Large grasslands dominated by sparse cool-season grasses intermixed with broad-leafed forbs                      |
| Common Yellowthroat     | Spring/Summer | Thick, broad-leafed vegetation including wildflower meadows, wetlands and fallow fields                          |
| Dickcissel              | Spring/Summer | Large grasslands with dense cover, tall vegetation, and many (>10/ha) elevated song perches                      |
| Eastern Bluebird        | Year-round    | Wide range of grasslands but requires cavities for nesting and multiple perches                                  |
| Eastern Kingbird        | Spring/Summer | Wide range of grassland habitats with mature trees nearby for nesting  |
| Eastern Meadowlark      | Year-round    | Large, expansive cool-season pastures and hayfields with sparse vegetation                                       |
| Field Sparrow           | Year-round    | Both warm and cool-season meadows containing ample forbs and shrubs  |
| Grasshopper Sparrow     | Spring/Summer | Large, expansive cool-season pastures and hayfields with short vegetation  |
| Indigo Bunting          | Spring/Summer | Both warm and cool-season meadows with ample forbs and shrubs, large or small fields                             |
| Loggerhead Shrike       | Year-round    | Large contiguous grasslands (pastures) with scattered shrubs for perching and impaling prey                      |
| Northern Bobwhite Quail | Year-round    | Requires mixture of habitat types including meadows with ample edge habitat for cover and bare ground            |
| Northern Harrier        | Year-round    | Expansive grassland habitat with sparse/short grasses for hunting and patches of tall/dense grasses for roosting |
| Red-winged Blackbird    | Year-round    | Wide range of grassland habitats, higher densities in wet areas with patches of thick vegetation                 |
| Short-eared Owl         | Winter        | Expansive grassland habitat with sparse/short grasses for hunting and patches of tall/dense grasses for roosting |