5 MODEST STEPS TOWARDS "BIRD-FRIENDLY" HAY MANAGEMENT IN SOUTHERN MARYLAND

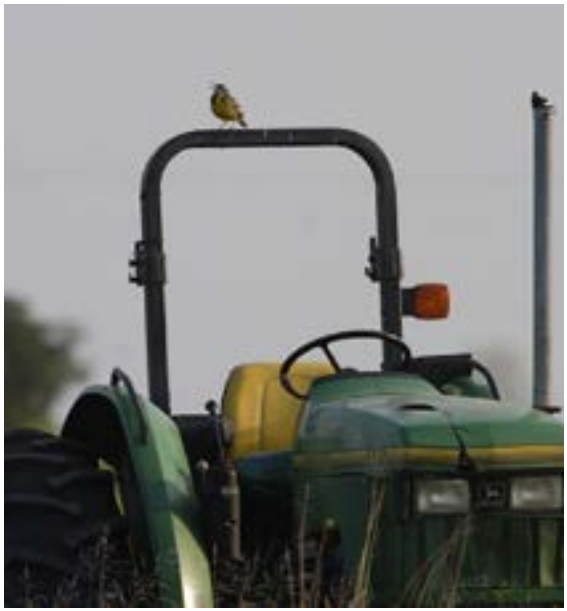

photo credit: Bill Hubick

A COLLABORATIVE PROJECT of

- **Farmers Feeding Southern Maryland**
- **Historic Sotterley, Inc.**
- **Patuxent Tidewater Land Trust**
- **Southern Maryland Audubon Society**

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For further information, visit our website at

Bird-Friendly-Farming.org

THREATENED BIRDS NEST IN HAYFIELDS

Southern Maryland is blessed with an abundance of wildlife, but time is running out for many species of birds. Grassland species -- such as the Eastern Meadowlark and the Grasshopper Sparrow – have suffered drastic declines. The Maryland State Wildlife Action Plan lists both as "Species of Greatest Conservation Need." Their populations have crashed as hayfields have been converted to development or cropland, and management for hay production has intensified through the use of modern machinery, chemicals and more frequent mowing. This project invites both hay farmers and conservationists to explore hay management techniques that better balance the needs of hay farmers and the needs of birds that use hayfields for nesting and raising their young.

THE NEEDS OF HAY FARMERS

In Maryland, private land owners are the key to breeding success for grassland birds because less than 10 percent of land ownership in Maryland is public. The timing of each mowing often varies from year to year, depending on the weather, the availability of equipment, the number of fields to be harvested, the needs of the intended customer and other factors. In Southern Maryland, the first mowing typically takes place from mid-May to mid-June and usually yields the most nutritious and commercially valuable crop. Once a harvest begins, the passage of heavy equipment over the land is frequent. Tractors repeatedly haul mowers, tedders, rakes and balers across the fields, followed by forklifts and trucks to remove bales from the field for storage or market. Rain, drought and equipment breakdowns frequently throw off schedules, forcing hay farmers to adapt to circumstances about when to harvest the hay and how quickly the equipment can be freed up from one field for use in another.

THE NEEDS OF GRASSLAND BIRDS

At least two species of grassland birds – the Eastern Meadowlark and the Grasshopper Sparrow – nest in hayfields. Researchers have found that both species thrive in open fields of 20 acres or more of grassland. If the acreage is less than 20 acres, or interrupted by hedgerows, trees or buildings, the birds are much less likely to use those fields for breeding. Males will begin to establish territories in late April. Females tend to arrive on the breeding grounds several weeks later, but breeding, nest building and egg laying soon follow. Incubation of eggs takes 2 weeks, and young birds become capable of short flight about 2 weeks after hatching. From nest building to fledging, the cycle takes about 35 days. If the first nesting attempt fails, re-nesting is often attempted, which can continue the breeding cycle well into July. During this period, these ground-nesting birds are particularly vulnerable to haying operations. The first mowing in May/June can be particularly lethal, destroying eggs, nests and recently hatched young which cannot escape the repeated passes of heavy equipment.

Eastern Meadowlark photo credit: Shelley Rutkin

FIVE MODEST STEPS TOWARDS "BIRD-FRIENDLY" HAY MOWING

Through our research of similar programs and our experimentation on 100 acres in Hollywood, MD during the haying season of 2021, we have concluded that there are at least 5 potential methods of "bird-friendly" hay management that can help save threatened species of hayfield birds while still accommodating most of the commercial needs of hay farmers:

1. Adjust mowing schedules to avoid the "peak-breeding season"

Delaying the spring mowing until July 15 provides the greatest protection for nesting grassland birds, but is a big ask of hay farmers. Recognizing this, the USDA offers an economic incentive to delay mowing until July 15 to compensate for the loss of product in the spring months. For more information about this program, call your local Natural Resource Conservation Service (NRCS) office or visit this website: www.md.nrcs.usda.gov.

Few Maryland farmers have applied, either because they don't know about the program or because of confusion over the amount of incentive. This needs to change. In the absence of farmer participation, hayfield-nesting birds are not getting any protection from this program. We are strongly recommending that in Southern Maryland, the NRCS initiate reforms to ensure that the program works – through outreach and by specifying either an adequate per acre incentive for delaying mowing until July 15, or by requiring the first mowing prior to May 10, or both. The May 10 deadline for a first mowing - followed by a delay until July 15 for any second mowing - would mirror an NRCS experiment undertaken in Vermont based on research at the University of New England. Vermont has found that mowing just two weeks earlier than "peak breeding season" can have significant breeding benefits for the birds while still preserving most of the commercial benefit from the first mowing.

2. Sequence the mowing of multiple fields

When scheduling the mowing of more than one field, first assess which fields are the best or worst for breeding grassland birds. Research has shown that in Southern Maryland, Eastern Meadowlarks and Grasshopper Sparrows are most likely to use fields of greater than 20 acres, unbroken by trees, hedgerows or buildings. If practical, mow the fields that are least likely to be used by nesting grassland birds during the mid-May-to-mid-June peak breeding period, and mow the other fields later or earlier than the breeding peak. For example, if a haying contractor has 4 fields to mow – one of which is 100 acres unbroken by trees or buildings, while the others are smaller and divided by forests or hedgerows – then mowing the big unbroken field prior to peak breeding season before mowing the other three can reduce grassland bird mortality.

3. Increase the height of the cutting blade

Increase the height of the cutting blade to 6-8 inches. Raising the cutting height reduces hay production somewhat, but it has two important benefits: first, it reduces the likelihood of direct destruction of both nests and breeding birds by the mower, and second, it hastens drying by laying the cut hay on higher stubble.

4. Use "flushing bars" and avoid high speeds

As mowing technology has evolved from sickle bar to disc mowers, so has the ability to increase speed on the field. This makes it difficult for breeding birds to flush and escape the mowing blades. One solution encouraged by USDA/NRCS is to attach a "flushing bar" on the front of the tractor. The "flushing bar" is

a horizontal bar with chains, cables or belts hanging down to the ground to flush birds from their nests as the mower approaches. Running the mower at modest speeds also increases the escape time for nesting birds, whether or not a "flushing bar" is used.

5. Leave an un-mowed "refuge" in the biggest fields

Different mowing patterns can have better or worse impacts on nesting grassland birds. In our own experience, we have found that both Eastern Meadowlarks and Grasshopper Sparrows tend to flush to any open areas that have already been cut, while other experiments have observed the birds seeking refuge in the still-uncut portions of the field. But regardless of the immediate flush-and-escape behavior of the birds, if several acres are left un-mowed in the center of a large hayfield until after July 15 (when most breeding or re-nesting has already occurred in Southern Maryland), this hastens re-nesting and preserves some active nests at only a modest cost to the bottom line.

CONTACT US

Interested in learning more about how we can save Southern Maryland's grassland birds while preserving our rural heritage? Please visit our website at

Bird-Friendly-Farming.org
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