FOR THE BIRDS:

How Compost Can Aid in Grassland Bird Conservation and Sustainability

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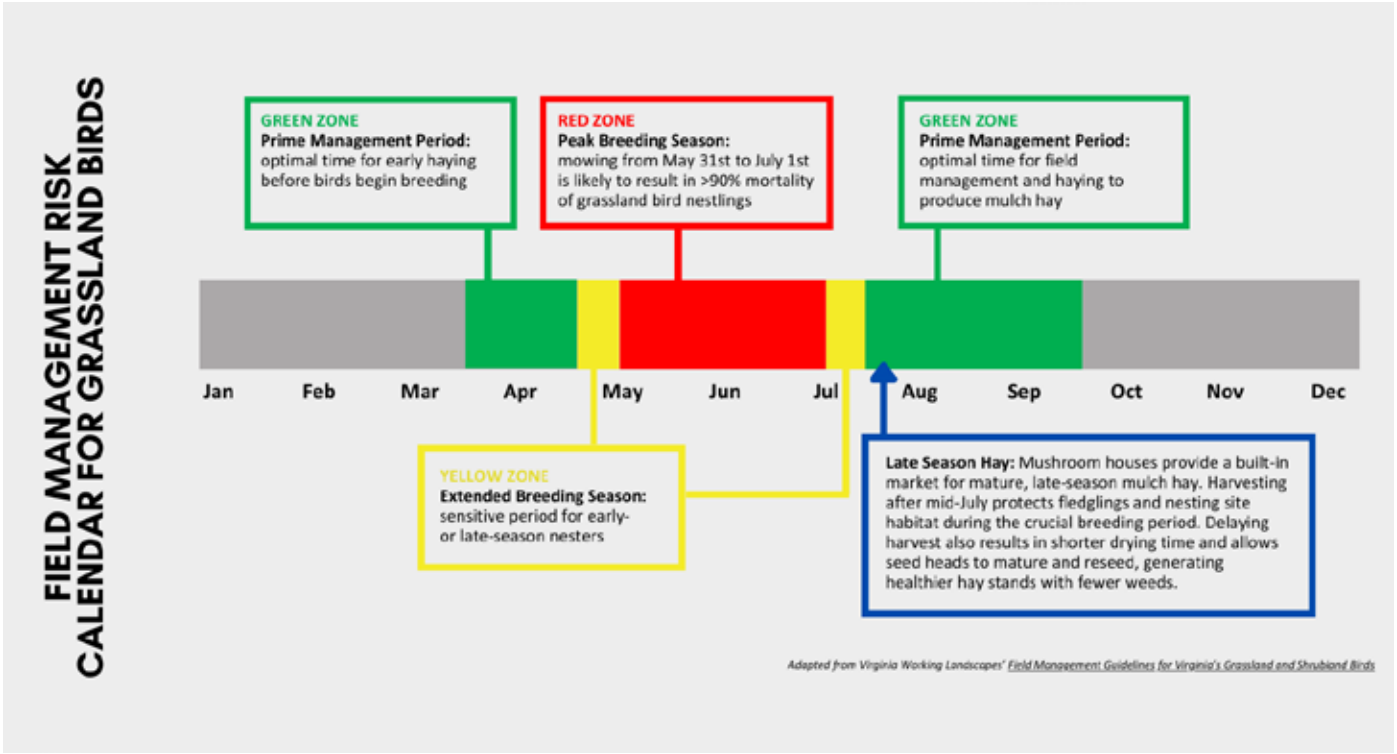
In 2022, the Grassland Bird Collaboration (GBC) was launched in Chester County. The GBC, a program of Willistown (PA) Conservation Trust (WCT), works with landowners and farmers to conserve and augment grassland bird populations through conservation land management practices, research, education, and community engagement. The GBC's goal is to create a ***working conservation landscape*** where partners work together to address issues affecting grassland birds. WCT and American Mushroom have secured funding through the Cornell Lab of Ornithology to expand the GBC's reach to mushroom farmers and their hay suppliers.

In the last half-century, the number of grassland birds has decreased dramatically due to changes in farming practices and increased land development. Consequently, grassland birds are experiencing the greatest declines of any habitat group. The mushroom industry can help change the trajectory of these declines. And it can be advantageous for the industry as well.

Several species of grassland birds have adopted hayfields that are managed for late-season mulch hay used in mushroom compost as their breeding grounds. These birds build their nests directly on the ground, and lay their eggs in small cups of grass buried deep beneath the dense, thatched hay. These nests are well-hidden and far from the field's edges to protect them from predators. It is a wise nesting strategy, but it can also make it difficult to protect the nests and their young from field-wide disturbances, like mowing.

To ensure breeding success, the fields should remain undisturbed from the time of nest building until the young fledge, which is a period of about 30 to 40 days. There are several stages to breeding, including: nest-building, egg-laying (usually one per day for several days), incubation, and brooding during which time the babies are in the nest and completely dependent on adults for feeding. This



is a particularly vulnerable time when the survival of the baby birds hinges on what happens in a 6-inch space in the middle of a hayfield.

But that vulnerability doesn't end there. After about two weeks in the nest, they undergo a flightless period in which they move out of the nest, walking and running in the grass, but are unable to fly. Once they leave their nests, it takes about two weeks for the young birds to be able to take short, sustained flights.

When they become strong enough to fly away from the tractors, they are then able to survive the field disturbance caused by mowing. Until that time, the adults have put the future of the next generation into the hands of those who manage the land.

Mowing before birds complete their nesting cycle removes available habitat and can reduce breeding success if birds have already begun breeding. Late-cut, field-cured hayfields used to produce mulch for mushroom farms is ideal habitat during the vulnerable breeding period and provides a better hay product for composting and field maintenance. If hay if allowed to stand in the fields through June, the seed heads have time to mature, which helps maintain denser grass cover that produces higher hay yields and provides safe haven for the developing babies hidden within its protective layers.

In Chester County, PA, the GBC has piloted late-mow agreements with hay farmers. In the fields where these birds are nesting, there is a "no-mow" period until around July 4th. Shifting mowing dates gives young birds time to develop and can increase breeding success among ground nesting birds. Implementing a formal "no-mow" period provides important breeding habitat in which young birds can develop in a secure environment before the nesting grounds are disturbed and can, over time, help boost population numbers.

Jamie Hicks, a Chester County farmer, has always cut most of his hay for mushroom compost. He began participating in the GBC program a few years ago. He said, "Mowing after July 1st works for me. The program gives me more flexibility to space out mowing dates, and it's something the landowner and I agree on before the season. It's also an opportunity for people to see how farmers can be good conservation partners."

To ensure this important grassland habitat remains productive for farmers and the breeding birds that depend on it, AMI and the GBC will provide support for mushroom farms whose suppliers may be able to delay mowing.

Adding to the Mushroom Industry Sustainability Story

AMI's vision for participation in this effort for the industry is to develop more ESG (Environmental, Social, and Governance) assets for the mushroom industry sustainability story. Pointing to ecological benefits adds to the industry's composters and farms' ESG profiles. This grassland birds project, like the mushroom-farm bird colonies for Phorids initiative, expands the economic ornithology

scope for the industry. It fits neatly into ESG efforts, particularly through its focus on environmental conservation and biodiversity. By collaborating with organizations like the Willistown Conservation Trust and the Grassland Bird Collaboration, the mushroom industry is actively working to protect vulnerable bird species while maintaining sustainable farming practices.

By promoting land stewardship, this effort aligns with ESG goals, showing the industry's commitment to responsible land use, biodiversity enhancement, and environmental health. Additionally, it fosters strong governance by encouraging collaboration among farmers, conservation groups, and landowners to address ecological concerns. Such partnerships help integrate sustainability into business operations, benefiting both ecosystems and farming communities.

This approach also demonstrates how businesses can contribute to social good by supporting local wildlife and educating communities about conservation. In essence, this initiative showcases the creative ways by which the mushroom industry can meet its environmental responsibilities through ecosystem services, while achieving broader sustainability goals that appeal to investors and consumers alike.