



COVER CROPS – ALL UPSIDE FOR THE FARMER AND THE ENVIRONMENT

by Marc Eads

Last quarter, I described several tillage practices and how these practices can affect the environment by either allowing soil to move offsite through erosion, or remain in place and out of our air and water. Due to a very wet spring, I have witnessed the good and bad of modern agriculture as conditions were favorable for the powerful force of water to wreak havoc on farmer's fields that lay unprotected by either plant residues from the previous year's crop, or lack of beneficial cover crops to hold our precious soils in place and keep our waters clean.

The use of cover crops is not a new concept in agriculture. Beneficial plant species have been used to enhance soils, control weeds and build fertility for thousands of years. Although our ancestors may not have been fully aware of the exact science behind the success realized when implementing desirable plants, they were fully aware of the benefits. Here in the United States cover crops were used since the mid-1800s and widely used as "green manure" on operations during the 1900s. Using plants to build soil health, add and hold fertility, and manage weeds has a long history in helping mankind feed and clothe the world. Here in Indiana, the use of cover crops is catching on and the acreage benefitting from their use is increasing, but more work needs to be done towards implementing their use on more acres.

cont. on pg 2

Photo: Greg Doms, a farmer from New Carlisle and Elsie Assan from Purdue University by an Unverferth Air Seeder which is used to plant cover crops

Inside This Issue:

- THE IMPORTANCE OF COVER CROPS
- LETTER FROM THE ED
- A NOTE FROM OUR BOARD PRESIDENT

p1

p4

p6



WHY USE COVER CROPS?

The wise decision to implement cover crops into a soil management strategy should be applauded by landlords and non-farming neighbors. The positive environmental impacts that can be gleaned from even one well timed and executed planting can have a long-lasting positive effect. I have been fortunate enough in my life to have witness what plants and plant communities are capable of when it comes to healing the land and supporting life. Plants have the ability to stabilize and protect the soil surface while filtering water. What most people do not realize is the incredible amount of biological activity that plants support below the soil surface and the importance of this complex of subsurface biology and the positive environmental effects to be had by maintaining and feeding this biology.

Using cover crops benefits the biology of the soil by acting as the catalyst for life and primary driver and food source for this diverse biological system during the times of the year that crops have senescence and food for this system begins to wane. Having something growing from September until hard freeze sequesters nutrients in place and feeds earthworms, beneficial nematodes, bacteria and fungi and helps them to proliferate for a longer period and out compete non-beneficial pathogens. Many cover crops are winter annuals which break dormancy early in the Spring to help jump start this biology heading into the growing season.

As an agronomist I have helped to coach growers into more conservation minded approaches whenever the opportunity has presented itself. I share with those growers that we need to “build the biology back” into the soil. Even if it doesn’t fully resonate with them as I tell them this, they all see the message that I am delivering within a couple of years’ time as the biology returns and productivity increases. The very first, and possibly the most important return to the soil will be earthworms. I have been in this business consulting farmers for a very long time, and I have drawn a direct correlation between the ability for a soil to yield, and the number of earthworms present. Over one million earthworms will call an acre of well managed healthy farm ground home. I have witnessed first hand farms that are void of earthworms. I do not believe I need to share the dismal economics coming off of these farms that were managed so poorly that it caused the earthworm population to vacate and find “greener” pastures. Healthy earthworm populations are able to consume two tons of dry matter per year, and the castings that they leave behind are rich in nutrients. These nutrients are both in highly plant available forms, while a certain percentage are in an more time-released organic form. I like to compare earthworm castings to bat guano as I relate its importance in the soil and the value that it brings to plant production.

Physically, earthworms “till” a tremendous amount of soil every year, but the two biggest physical benefits of having them inhabiting our fields are helping to control compaction, and more importantly improving the drainage in our production fields. Earthworm burrows are created vertically giving them a big advantage over most soil organisms which create horizontal burrows. These vertical burrows left by earthworms become drainage passages for surface water. Three years ago, I started working with a grower to implement a much softer conservation approach to his operation. We halted any tillage which turned the soil, and relied on no-till and light vertical tillage to pull the weight on his farm. I was initially surprised by how quickly we saw earthworm numbers rebound, but was even more impressed by the amount of natural drainage were seeing due to their return. Three years into it, his fields are fit for planting way before his neighbors who still drag iron across their fields. This has allowed him to plant earlier on the calendar and plant later and higher yielding hybrids. The benefits go on and on, but are all real and measurable and would not have taken place without our friend the earthworm.

WHAT PLANTS ARE USED FOR COVER CROPS?

Species selection and propagation of cover crops has become a pretty accurate science and is driving a flourishing business wherever crops are grown. Species are selected for certain physical characteristics depending upon their desired effect upon the soil. Turnips, radishes, annual ryegrass and other species are meant for driving roots and biomass deep into the soil profile improving soil tilth and drainage. Clovers, vetches, and certain pea species are legumes and can be planted to produce nitrogen. Rapeseed (canola) and oats can be added for their ability to sequester nutrients and create dense root systems helping to create structure in the top six inches of the soil profile. Cereal Rye and Wheat can be used to establish a quick “green up” in the Fall and as winter annuals break dormancy early in the Spring serving as the first live choice on the biological menu in the soil while having allelopathic effects which help to control weeds in the Spring.



Choosing a cover crop should be considered the fun part of the job for an agronomist. These species of plants all do some things better than others and a mix of species is typically the best option for a seeding. Factors such as Fall versus Spring termination, following crop considerations, Spring chemical applications, as well as cost and supply may all play into decisions on a species list. There are some great suppliers to work with across the Midwest, but stay with a legitimate supplier with a good reputation of providing high germ weed free seed. Local retailers and seed dealers are out there who can help make good recommendations depending upon what is trying to be accomplished.

IS WHEAT IN THE ROTATION?

Keeping wheat in the rotation will give most growers their best opportunities to be able to plant a cover crop early in the season (July in Indiana) and allow them to grow large, out compete weeds, and do their wonderful work in the soil profile. Heading into 2025, wheat is proving to be a good crop financially. If there are fields that farmers would like to hit a reset button on, planting wheat this Fall may be a solid move towards incorporating cover crops to help that reset occur.

Native Plant Sale; It's Not Too Late!

Our regular Native Plant Sale is closed for 2024! However, we are still offering plant orders through this fall in partnership with Garden For Wildlife. You can browse a large selection of natives and even customize your order to your needs.

For more info on some of the plants, don't forget to check out our [Native Plant Finder!](#)

Thanks to our partnership with Garden for Wildlife, we are able to offer even more native plants most of the year. These plant kits vary in size and composition depending upon what you order, but are all shipped to your door.

For more information visit indianawildlife.org/take-action/native-plant-sale



▲ Photo; Example of a custom kit

Apply for the 2025 Holt Scholarship!

The IWF Endowment awards a \$1,000 scholarship in memory of Charles Holt, a lifelong member and champion of fish and wildlife resources. Applicants must be at or above a sophomore level and studying a field related to resource conservation or environmental education. Applications are accepted until June 15.

Visit www.indianawildlife.org/Holt-Scholarship to apply.



Letter from the Executive Director

With August coming to an end and the hope of cooler temperatures on the horizon our team at the Indiana Wildlife Federation looks back to a busy summer, and ahead to an impactful Fall. We look forward to upcoming monarch tagging events, corporate service days and seasonal wonder of avian migration, which has already begun.



In June IWF hosted our “Cranes Over Indiana” with our partners the International Crane Foundation and Conner Prairie. This members’ only event highlighted the important role Indiana plays in the migration (and even breeding) of both Sandhill and Whooping Cranes. Attendees also had the opportunity to enjoy our most recently certified sustainable trail showcasing views of the White River and frequent glimpses of Bald Eagles and other wildlife.

IWF, along with many partners, continues to work on an Ohio River Basin Restoration plan which is the first step in securing Federal funding to revitalize the Ohio River basin. To this end, IWF staff and board members attended a listening session in Louisville, KY hosted by Ohio River Basic Caucus co-chairs Rep. Erin Houchin (R) and Rep. Morgan McGarvey (D). The Ohio River, considered the 2nd most endangered river in the United States, has for too long been overlooked, despite its vital role as a source of drinking water and recreation for millions of Americans and innumerable wildlife. We are optimistic that we can continue to build momentum and help begin the process of rejuvenating the Ohio River basin for wildlife and humans alike.

In mid-August, we also hosted our Third Annual Conservation Top Shot. This fundraiser brought together conservationists from across the state for a day of comradery and fun. Throughout the day we discussed the success and challenges facing wildlife in our state while also getting out on the range and competing for the Top Shot. The event was such a success that we are already planning our 4th Conservation Top Shot, scheduled for August 21, 2025, we hope to see you there!

With Congress back home for the August recess IWF hosted staff from both Senator Braun and Senator Young’s offices for an informational, and extremely hot, farm tour in the northern part of the state. Several growers, congressional staff and both the Indiana Wildlife Federation and National Wildlife Federation met in New Carlisle to discuss how conservation agriculture techniques can benefit both wildlife and the producers who work tirelessly to provide food for all of us. While incredibly hot we were all treated to a wonderful conversation about how growers throughout the state are improving yields while simultaneously reducing agricultural runoff and preserving environmentally sensitive areas. In the coming months we will continue to grow our presence in the agricultural sphere and begin to build a roadmap for how both wildlife and agricultural producers can benefit from thoughtful techniques like conservation tillage, buffer strips, and cover crops.

Finally, earlier this week IWF was thrilled to share in one of our states great conservation success stories. IWF staff joined a variety of partners to release over thirty captive bred Hellbenders into the Blue River near Corydon, Indiana. Indiana’s largest amphibian has suffered devastating population declines due to increased chemicals and sediment in our waterways. These remarkable creatures, once common throughout the state, are now found in only a few remnant populations. Yet, through the dedication of so many partners, and the increased awareness of how human activities can impact these creatures hope remains, and the individuals released this week are yet another step in the miraculous recovery of this iconic species.

Conservation is hard work, and ensuring wildlife have a place alongside humans will always be challenging. Yet, with the support of members like you, and the help from passionate partner organizations the future is bright.

With Love of Wildlife-

Dan Boritt



▲ Photos; You couldn't ask for nicer weather to shoot some clays



▲ Photos; Marc Eads speaking on the importance of conservation agriculture



▲ Photos; Releasing some Eastern Hellbenders, one of our most iconic wildlife species, into the Blue River



Letter from the Board President

Hi and welcome to the Indiana Wildlife Federation newsletter. I am Rick Cockrum, chairman of the board. I want to thank you for your interest in IWF and your commitment to conserving Indiana's wildlife and wildlife habitat. I was raised in southwest Indiana just a few blocks from the Wabash River. Growing up in Vincennes if you had a bicycle and a fishing pole, you were golden. There was always an adventure to be had.

While my professional life took various turns, I have always had a passion for the out of doors. Be it hiking, camping, paddling, hunting, and especially fishing you can count me in. Prior to becoming a board member at IWF, I served on the Indiana Department of Natural Resources Commission and am currently on the DNR Foundation.

I joined the IWF board several years ago because I believe strongly in our mission to preserve our natural resources through sound management practices, education and advocacy. We are Indiana's oldest conservation organization having been founded in 1938. People who shared our passion joined together over 80 years ago to protect our state's natural resources. We have them to thank for our parks, trails, wildlife habitat and much more. It is our challenge to continue that mission for our children and grandchildren.

In my lifetime I have witnessed the many success stories of IWF and others' work. When we see an eagle, osprey, otter, minx, bobcat and many species that, at one time, were almost extinct, we should thank those ahead of us who fought to maintain a healthy ecosystem in Indiana.

But our work is far from done and IWF is committed to carrying their torch forward. We have a great board of directors and staff but we need people such as yourself continuing your support. Again, thank your for that support and we pledge to use our resources wisely to protect our states natural habitat.

Rick Cockrum
Board President



Habitat Programs Updates

Do you belong to or manage a group looking for educational workshops? IWF offers several presentations from our Wildlife Habitat Workshop, which covers the basics of creating habitat at home to our Indiana's Wild Climate Workshop where we discuss the impact of the climate crisis on Indiana and our wildlife. If you would like more information or want to schedule a workshop, please visit our [Workshops Page](#) or contact Aaron Stump at stump@indianawildlife.org.



▲ Photo; presenting to Teter Retreat and Organic Farm



▲ Photo; Wildlife Friendly Habitat Workshop at Wild Birds Unlimited, Schererville

ADVERTISE HERE!

Does your business share the IWF vision of sustainable wildlife and wildlife habitats for Indiana? If your business would like to show its commitment to conservation and be highlighted for doing so through our communications and website, please contact us by e-mail at info@indianawildlife.org.