

Agriculture and Wildlife—More Than Peacefully Coexistent

Like farms and ranches throughout the nation, our Henry A. Wallace Beltsville Agricultural Research Center (BARC) is home to diverse native wildlife. In fact, the “Green Wedge”—the 30,000-plus-acre natural area we share with the U.S. Department of the Interior’s Patuxent Research Refuge and other government agencies—harbors a native gene pool of worldwide significance.

The article on page 12 shows how the interactions of our agricultural researchers with Patuxent wildlife researchers and with this precious land resource end up benefiting both wildlife and the American public by providing a healthier, safer food supply and cleaner air, water, and soil. It also shows how controlling agricultural pests without synthetic pesticides can benefit wildlife, farmers, and the general public.

The article describes some of the work of the ARS Insect Biocontrol Laboratory at Beltsville. This lab contributes to sustainable agricultural systems by developing naturally derived pest control agents, decreasing the amounts of synthetic insecticides used, reducing undesirable effects of synthetic pesticides, and delaying development of resistance to environmentally friendly insect control measures.

A pair of nesting bald eagles overlooking a swamp created at BARC by beavers is a telling symbol of our environmental stewardship of this area.

Beaver Dam Creek flows below the eagles’ nest—80 feet up, in an oak tree at the swamp’s edge—on past the composting center where we turn all our organic waste into compost that’s used in our nutrient management plan for crop fields and mulch for landscaping at BARC.

About 10 years ago, we started a sustainable agriculture program enabling us to practice what we preach. We began incorporating ARS research results into farm operations we use to grow corn, soybean, wheat, rye, and other crops to feed our livestock.

The composting center came from that program, along with buffer strips around the facility to protect Beaver Dam Creek. We have placed 20-foot-wide grass buffer strips around 80 percent of our fields and adopted many other practices—including reforestation—to filter out possible pollutants before they reach our streams. The stream water is now clean enough to support brown trout. Our streams are tributaries that feed into the Northeast Branch of the Anacostia River, which flows into the Potomac River and then to the Chesapeake Bay. We have reduced pesticide use at BARC by 75 percent from what we used 10 years ago.

Reflecting our concern for the Chesapeake Bay watershed, we received the White House “Closing the Circle” award for

our use and demonstration of biodiesel in 2000, for environmental management in 2001, and for our use of biobased products in 2002.

The late Helene Cecile, who was an ARS expert on poultry feed contaminants, worked closely with Patuxent experts on pesticides and other contaminants endangering wildlife. Scientists at the ARS Environmental Quality Laboratory here continue this work.

BARC scientists are doing agricultural research, and Patuxent scientists are doing wildlife research, and they mesh quite nicely in these research projects.

Bob Whitcomb, a retired ARS entomologist who is still an active collaborator, works closely with Patuxent scientists, both on research and on his private birding interests. Whitcomb inspired a great number of scientists—many at our Insect Biocontrol Laboratory, like Ed Clark and Kevin Thorpe—to become birders.

These are typical of BARC scientists who, both on and off duty, promote environmental causes—whether it is speaking to the public, participating in Earth Day festivities, interesting young people in nature and science, or working with organic or other sustainable agriculture farmer groups.

The late Larry Zeleny, a retired BARC scientist, started the North American Bluebird Society with a trail of bluebird nesting boxes still maintained on fenceposts here. Today there are similar trails across the country.

Doug Bolt, a retired BARC animal scientist, leads a birders’ group for BARC employees, showing them the eagles and numerous songbirds and wildfowl during monthly lunchtime outings. Our current agricultural scientists, like Clark and Thorpe, continue this tradition as naturalist-scientists because of their love of the outdoors, keen observation skills, and sense of wonder at organisms like microbes and insects.

These employees participate on their own time in national bird surveys that document the birds of BARC and surrounding lands while contributing to scientific understanding of birds and their migrations. Clark has his own growing list of amphibians at BARC. The article in this issue announces that a guide to the identification of BARC flora will soon be online.

It makes sense to inventory the native flora and fauna at BARC because they contain the genetic heritage of our farm. From this gene pool can come natural biocontrol agents to help us further reduce pesticide and fertilizer use on our farm—and the nation’s farms. In fact, a new gypsy moth control called GYPCHK was developed using a virus native to BARC.

As good stewards, we recognize the need to respect, preserve, and enjoy this biodiversity and the land that supports it.

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