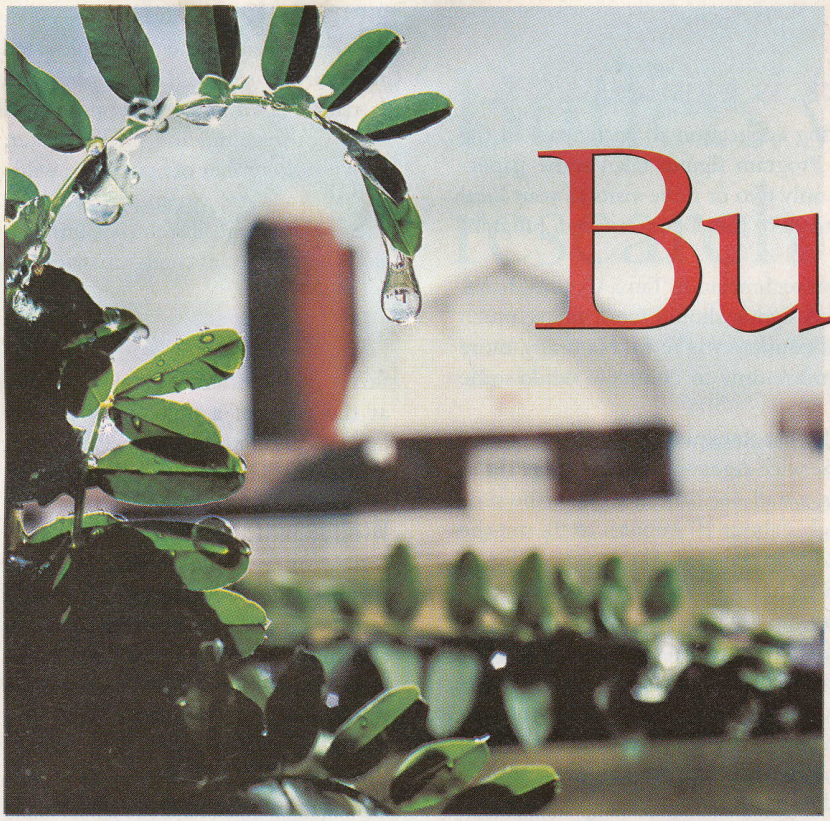

Buffers — Common Sense Conservation

Financial incentives make them even more attractive.

By Monte Sesker, National Issues Editor

Buffers belong in conservation. The permanent strips of vegetation work for you, they work for your neighbors, they work for your state, your nation.

Buffers protect soil and water. And they make economic sense.

More than 100,000 farmers and ranchers are convinced. Collectively, they have established nearly 612,000 miles of buffers stretching from California to Maine, Washington to Florida, Minnesota to Texas and every state in between.

Ask Paul Hendrickson, Garfield, Wash. He swapped cows for trees. His buffer project covers 250 acres and protects a stream. Or, how about Gene Barto of Tiffin, Ohio. He seeded 40 acres of filter-strips and waterways to help clean up Lake Erie. John Long, Newberry, S.C., has miles of contour buffers to protect fragile Piedmont soils. Trout swim in a temperate stream protected by a riparian buffer zone on Bernie Beatty's New Jersey dairy farm. It has been the only cool spot during one of the worst summer droughts ever.

Kentucky farmer and precision farming consultant Rick Murdock argues that buffers also boost your bottom line. Buffer zones are often seeded on low-producing areas, so inputs are diverted to better soils. Yield averages often increase because of it. He has records to prove you can save $80 an acre, or more, by not farming along blue-line streams.

> "WHEN COMBINED WITH CONSERVATION TILLAGE AND NUTRIENT AND PEST MANAGEMENT, BUFFERS CAN ALL BUT ELIMINATE SERIOUS WATER POLLUTION AND RELATED ENVIRONMENTAL PROBLEMS FROM FARMS."
>
> —Agriculture Secretary Dan Glickman

Buffers do not represent new technology. Their benefits have been known for years. The 1996 Farm Bill revived the buffer concept and continues to provide the enticement to establish them. The Natural Resources Conservation Service (NRCS) is spearheading a drive to get more buffers in place. The Farm Service Agency (FSA), local soil and water conservation districts, the Cooperative Extension Service, state conservation offices, agribusinesses and others have joined the cause.

"Common sense conservation" is the theme of the vigorous promotional effort. You'll hear it referred to as the "National Conservation Buffer Initiative."

The goal is to install two million miles of buffer strips by 2002. The effort focuses on encouraging enrollment of land in government conservation programs, as well as linking it to many other public and private campaigns. A number of financial incentives are available to make the program attractive

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The paperwork is painless

Like any government program, making application to participate in the continuous Conservation Reserve Program signup takes some paperwork. Don't let that worry you. It takes only two or three visits to your local office and an hour and a half of time or less to join a conservation program that benefits you 10 to 15 years.

Chester Worden, veteran conservation technician in Tama County, Iowa, has helped enroll countless acres. He says signup should work pretty much the same no matter what region of the country you're in. Naturally, more complex applications may take a little more time to complete while some simpler contracts will take much less.

Worden offers this brief overview of what to expect.

- You decide to visit your local Farm Service Agency to learn more about the opportunities. In just a few minutes, a staff person can explain the program and answer specific questions. It takes about 10 minutes to fill out the actual application and indicate on a field map the area you want to offer.
- Your application is given to an NRCS technician who examines the practice and encourages you to let them draw up a whole farm plan.
- If needed, a technician will visit your farm or ranch to offer on-site suggestions. Once the conservation plan is prepared, the technician will be available to walk you through the details. A more complicated enrollment may require another office visit. The technician will explain such things as procedures to install the practice, number of acres involved, the cost-share allowance, the annual rental payment and other pertinent information. Expect it to take 30 minutes or less. In simpler cases, the plan may simply be mailed directly to the applicant, who gives final approval, signs and returns the CRP plan to FSA.

economically.

Agriculture Secretary Dan Glickman is a prime promoter. "Properly installed and maintained buffers can help keep pesticides, sediments and nutrients from reaching waterways," he says. "When combined with conservation tillage and nutrient and pest management, buffers can all but eliminate serious water pollution and related environmental problems from farms."

There are a host of basic benefits. They add beauty to the countryside and visually showcase your commitment to protecting the land for future farmers. Vegetation provides habitat for nesting birds and many species of wildlife.

Because the strips act as barriers and filters to help control surface runoff, fish and aquatic life in and around ponds, streams and rivers are protected from potential pollutants.

The flexibility of where conservation buffers fit make them especially useful for farmers and ranchers all across the nation. They can be installed along the edge of a field or within a field, next to a stream or around a pond. They work almost anywhere fragile lands and water need protection. To help you evaluate how buffers might benefit your land, here is a brief description of the most popular types and their primary purpose.

CONTOUR BUFFER STRIPS

These are typically strips of perennial vegetation alternated with wide cultivated strips farmed on the contour. Primary purpose is to reduce sheet and rill erosion, thereby reducing the movement of sediment, nutrients and pesticides. They provide excellent places for nesting and wildlife cover.

FILTER STRIPS

Strips of grass or other permanent vegetation are used to intercept or trap sediment, organic pesticides, nutrients and other contaminants before they can reach a body of water.

RIPARIAN FOREST BUFFERS

An area of trees and shrubs located adjacent to streams, lakes, ponds and wetlands. Used to intercept pollutants from both ground and surface water. Provides a number of benefits to wildlife and aquatic organisms. Protects streambanks and shorelines from erosion. Some species can be managed to provide timber.

FIELD BORDERS

Strips of perennial vegetation planted at the edge of a field. They protect against runoff as well as provide a turn area or travel lane for farm equipment.

WINDBREAK/SHELTERBELT

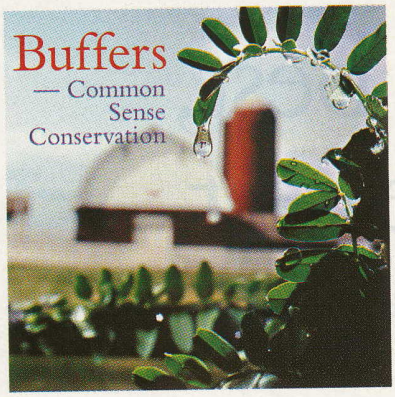
Single or multiple rows of trees or shrubs. Primary function is to protect farmsteads, livestock from strong winds and snow, as well as reduce wind erosion across open fields. They beautify the landscape and dampen noise.

GRASSED WATERWAY

This can be a natural or constructed channel planted in permanent vegetation. Located in an area where runoff concentrates, its purpose is to slow the release of water to a non-erosive level. They are often combined with filter strips at the outlet. Working together, these buffers are an effective means of trapping potential sediment, nutrient and pesticide pollutants, while preventing gully erosion.

There are other practices which qualify for the program such as living snow fences, shallow water areas for wildlife, crosswind trap strips, streambank plantings and similar buffers. Your local NRCS and FSA offices have all the information.

Buffers work best when they are part of a systems approach to conservation. They are especially effective combined with conservation tillage, nutrient management programs and integrated pest management. In some situations, NRCS works with several individual landowners to develop a system of buffers and related practices. When combined, this system offers even more far-ranging regional benefits to all involved.◆



Buffers work, research proves it

Up to 90% of nitrate runoff may be trapped.

■ *By Monte Sesker, National Issues Editor*

There's a way you can beautify the landscape, attract wildlife, protect streams and rivers, reduce field erosion and get paid for it. You may even increase farm profits.

And there is plenty of solid research to prove it.

"Installing riparian buffer zones can be the most important management practice for control of non-point pollution problems in humid areas. They will work in many situations across the nation," says Wendell Gilliam, a North Carolina State University professor and soil scientist who has been studying the practice for 15 years.

His work indicates a riparian zone established properly will remove up to 90% of the unused nitrogen leaving your fields. Riparian buffers are the native grasses, trees, shrubs or other vegetation growing along streams. They remove nitrogen through a combination of dentrification and plant uptake.

Many farms across the southeast and the nation have natural riparian buffers which need to be restored, says Gilliam. The recommended combination of plants and size of the structure depends on the individual site. Typically, in a flat area where no erosion is occurring, he recommends planting a grass strip a minimum of 25 feet wide. Where erosion is a problem, it should be at least 50 feet wide.

In many situations across the southeast, the general consensus is that trees should be included in the mix. Tree roots are more effective in removing ground water nitrate pollutants.

Across the country to the far west, Chris Hoag shares enthusiasm for riparian buffers and wetland areas. He's a USDA research scientist in Aberdeen, Idaho. "Buffers truly fit along stream banks to control erosion and help keep water clean," he says. "We've even been successful planting vegetation in riprap for even more protection.

"Farmers simply need to realize they don't need to plant right up to a stream's edge. That soil is generally lower producing and more fragile. Shrubs and trees are a better choice."

"Farmers across the west and northwest are starting to understand that buffers will make a difference," he adds. "It's a challenge, but we're encouraged."

In the Midwest, a team of Iowa State University scientists know what's happening in a well-designed buffer system.

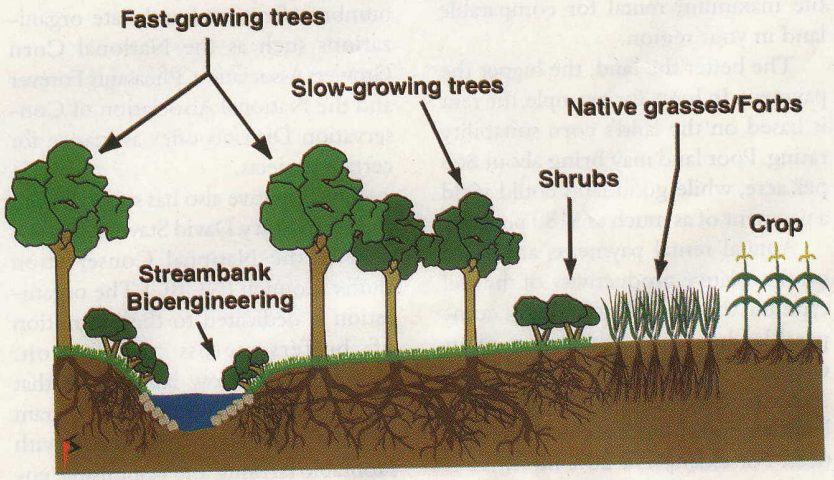
"A properly installed buffer system can effectively trap 90% or more of sediment movement from farm fields," says Joe Coletti, associate forestry professor. "That figure would be on target for most ag regions of the country."

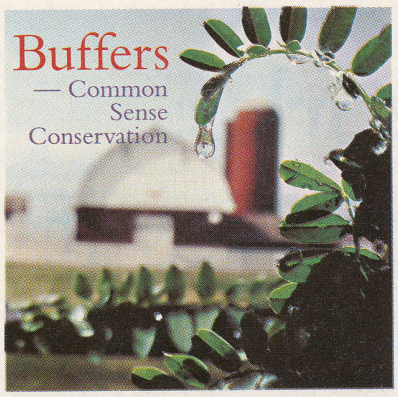
"While the overall impact may vary in other regions, there is plenty of research which shows buffers of various forms offer similar advantages in most other ag states," adds Richard Schultz, professor of forest ecology and watershed management at Iowa State.

ISU research shows a native grass strip just 10 feet wide captures 60% of the sediment. A 20-foot strip retains 80% of the sediment. Nitrate moving from field edge to stream edge through the buffer is reduced by more than 90%.

The cost to establish a riparian zone is relatively small, explains Coletti. Site preparation, planting and weed control runs about $500 per acre. USDA's 50% cost-share assistance cuts that to $250 an acre. Your first annual rental payment will almost cover the rest. Other private programs may help chop that cost even more. ◆

Multi-Species Riparian Buffer System





Farm the best, buffer the rest

Here's how the initiative can work for you.
By Monte Sesker, National Issues Editor

Okay, you're convinced. The Buffer Initiative does offer a common-sense approach to conservation. But you have some specific questions. You want to learn more about what financial incentives are available to get you started planting. The answers to your questions are as near as your local USDA Farm Service Agency (FSA).

There are several USDA programs that offer assistance in establishing and maintaining qualifying practices. The staff knows the rules inside and out. They'll point out how the continuous signup provision of the Conservation Reserve Program (CRP) is a great opportunity to put many of the practices mentioned into service. For instance, if the whole field isn't eligible for CRP, then consider establishing eligible buffers on the most fragile soils and farm the rest. It makes these practices economically attractive. There is no competitive bid process. If the land and practice requirements are met, your offer will be automatically accepted at the maximum rental for comparable land in your region.

The better the land, the bigger the payment. In Iowa, for example, the rent is based on the land's corn suitability rating. Poor land may bring about $65 per acre, while good land could yield a payment of as much as $180 per acre.

Annual rental payments are based on the relative productivity of the soil type and the average cash rent of comparable dry land cash rent in your county.

Extra incentives may be offered to landowners for installing certain practices. For example, a 20% incentive is added to the annual rental rate for field windbreaks, grassed waterways, filter strips and riparian buffers. Annual rental payments are made by USDA directly to the landowner soon after Oct. 1 each year.

Up to 50% cash-share assistance is available from USDA to help establish permanent practices. It covers such measures as site preparation, temporary cover until the permanent vegetation is established, grading and shaping trees or shrubs, mulch, supplemental in irrigation and fencing. The payments are made when the approved practices are completed and accepted. Contracts under the continuous signup are 10 to 15 years in length.

There are other federal programs that can help put buffers in place. These include USDA's Wildlife Incentives Program (WHIP), the Wetland Reserve Program (WRP), the Environmental Quality Incentives Program (EQIP) and the Stewardship Incentive Program (SIP).

Some state and local governments have programs to help with the cost. A number of national and state organizations such as the National Corn Growers Association, Pheasants Forever and the National Association of Conservation Districts offer assistance for certain projects.

The initiative also has support from private industry. David Stawick is president of the National Conservation Buffer Council (NCBC). The organization is dedicated to the promotion of buffers across the nation. "It's a way to show landowners that the private sector endorses the program and that these practices do mesh with profitable farming and responsible environmental stewardship," says Stawick.

From a practical standpoint USDA program incentives offer landowners the opportunity to get assistance installing conservation measures that may be mandated in the not too distant future.

"You owe it to yourself to learn more about buffers," he asserts. "You may be surprised at how much economic sense they make."

For more information, check their website at *www.buffercouncil.org.*

Tom Hoogheem isn't bashful about buffers. "Thank you, thank you, one and all who have heard the story and acted," is his rapid-fire reaction. "And shame on you if you haven't. Please take the time to read these stories. Call your local NRCS office, talk to other farmers. Your FSA staff or NRCS technician has plenty of names of enthusiastic participants who will be happy to visit."

Hoogheem is director of environmental operations for Monsanto Co., St. Louis, Mo., and also serves as council vice president. An avid conservationist, experienced in the benefits buffers provide, he also had a hand in founding the buffer initiative program two years ago.

"It's a concept that makes sense," he says. "I'm out there belly to belly with ag dealers and farmers promoting the program. I tell them the solution to water pollution is to change practices.

"If you spray enough Pepsi on bare ground, it's going to wind up in someone's water. Buffers, along with other conservation management practices, will help keep you farming without more and more rules and regulations and you get paid for it." ◆