Making Wildlife Habitat and Clean Farming Compatible

John Anderson, Hedgerow Farms

Farmers, land managers, and agricultural advisors have begun to realize the long-term impacts of the traditional approach of "clean farming." The practice of keeping all land that isn't planted to a crop either scraped or sprayed clean has resulted in cumulative soil losses and sediment buildup in unwanted areas. In most cases, attempts to keep ground "clean and bare" are unsuccessful, and they instead turn into reservoirs of unwanted weeds and thus seeds that then spread into the cropland. The results include a great monetary cost to the farmer, a cost to the land in the proliferation of weeds and other problems, and an overall loss of valuable habitat.

We all hear increasing complaints from many quarters about the negative impact of modern agricultural practices on the environment, especially on surface and ground water quality. Are there farm-friendly solutions to these challenges that do not threaten productivity and that help reduce erosion, improve water quality, and save labor or chemical costs in the long run? Have we forgotten that the goal of "clean" farming means weed-free, not vegetation-free?

Current clean farming practices in most of Yolo County's intensively farmed areas are dramatically reducing or eliminating wildlife habitat within the agricultural systems. The impulse to maintain borders, berms, and roadsides without vegetation, as well as use all available farmland for production, results in a brown, barren, landscape that lasts from plowdown in the fall until spring planting. One impact of successful farming is the unfortunate, lifeless state of vast acres once so important to the myriad of species that inhabited the Sacramento Valley. More and more, "productivity" is judged by measuring only intensely cultivated monocultures.

In our view there is no inevitable, long-term conflict between good farming and biodiversity. Quail, raptors, and pest-eating bats are less apparent in many sites. How often does one see a snake or toad on the road anymore? Threats to biodiversity come not so much from increased traffic, but from a lack of natural habitat. When farmers believe that only one version of "clean farming" is economically viable, one result is a lack of habitat.

The number one reason for bare dirt clean farming is to control the invasion of noxious weeds. This is certainly a valid concern since any area of bare and disturbed soil will be rapidly colonized by a host of nasty and unsightly vegetation. Star thistle, puncture vine, Johnson grass, bindweed, and mustard are but a few of the undesirables that we continually spray, disk, and scrape to eliminate. The number two reason for bare dirt clean farming is that it has become the accepted, automatic practice. Border vegetation implies sloppy farming—what will the landlords, neighbors or bankers think?

What can be done to reverse the current scenario without impacting the agricultural livelihood of the valley? Certainly most farmers appreciate wildlife and evidence suggests that a biodiverse border of plant species provides habitat for many beneficial insects and predators (such as raptors, bats and reptiles). Instead of a high maintenance, bare dirt system, we propose a balanced, self-sustaining perennial grassland that outcompetes any weedy invasion. Corridors of mixed native perennial grasses along roadsides, berms, ditch banks, canals, field borders, and any non-cropped area, provide excellent year-round habitat for wildlife without a negative impact on overall farming practices. Incorporating patches of native shrubs and/or trees into these corridors greatly increases the biodiversity and habitat value.

Hedgerow Farms, Yolo County

These concepts are widely practiced in Midwestern farming areas but have not yet been accepted by the California Valley farmers. Can it be done? Hedgerow Farms, located between Winters and Madison, has been incorporating and testing habitat corridor systems since 1978. Without question, native grasslands provide weed and erosion control, reduce maintenance, and greatly enhance the biodiversity and aesthetics of the farm. Over 100 species of birds use the farm throughout the year and dozens of rooster pheasants and dove are harvested during the hunting season. We now have a well-established quail population and have documented a myriad of songbird and beneficial insect species.

Neighbors Bruce and Charlie Rominger, who farm ground adjacent to the corridors, have not seen any significant negative impact on their crop production. In fact, the most difficult aspect of farming with corridors is training tractor drivers to recognize the borders and avoid disking over newly-established vegetation. We have also found that overall herbicide application decreases. The steps toward shifting away from a clean-farming approach are easy, especially for a farmer. It is simply a matter of farming the corridor to get it established.

A wide variety of native and non-native perennial grass seed is now available. Establishing a stand is similar to growing wheat or barley. Because perennial grasses grow much slower, weed management in the first year is very important. Timing of planting, selective herbicide application, and mowing are all important tools for success. The slow-growing establishment period explains why these grasses are not invasive weeds, and perhaps why they disappeared from much o alifornia's agriculturally-impacted areas.

In short, mixed plant field corridors are certainly a reasonable, workable compromise that could become normal, cost-effective practices for good farmland stewardship. The visual image of clean farming for the future should be borders of perennial grasslands, not lifeless borders of bare dirt. Weed-free does not mean vegetation-free. With the use of mixed plant field corridors, environmental quality and quality of life would be significantly enhanced, especially for those of us that live and work in the agricultural landscape.