Executive Summary of Organic Farmers' and Certifiers' Guides to Conservation of Biodiversity on Organic Farms

Introduction

The USDA National Organic Program (NOP) Rule requires the conservation of biodiversity, and the maintenance or improvement of natural resources, including wetlands, woodlands, and wildlife. Until recently, the organic community has had no common understanding of what these requirements mean. With the help of the Wild Farm Alliance (WFA) and others, the National Organic Standards Board approved biodiversity conservation additions into their model Organic System Plan in August 2005. WFA has additionally developed two guides for farmers and certifying agencies to help further define criteria that is consistent with the intent and standards of the NOP Rule. The guides draw on the knowledge and experience of organic farmers, certifiers, and conservationists, as well as on current research and literature, to lay out a range of farm management possibilities for a variety of situations that maintain and enhance biodiversity at the farm level and contribute to conservation at the watershed level.

The Need

Wendell Berry has written, "The question we must deal with is not whether the domestic and the wild are separate or can be separated; it is how, in the human economy, their indissoluble and necessary connection can be properly maintained." Of the 200,000 plants and animals now known to exist in the US, fully one-third are at risk, with 400 species already lost to extinction and another 100 missing. To put these statistics in perspective, one needs to understand that agricultural lands comprise roughly two-thirds of the continental US, and the destruction and degradation of native habitat during the conversion of these lands to present uses (farming and ranching) are the major causes for the listing of 42% and 26% of endangered species, respectively.

Organic Agriculture and the Ecosystem

From beneficial microorganisms to predators, agriculture innately functions within and interacts with the larger ecosystem. Bacteria and fungi break down organic matter and help to maintain soil quality and recycle nutrients. Native pollinators, which contribute to an estimated $40 billion to farms, can require native vegetation during non-crop flowering periods. Beneficial insects colonize a farm's native plants from wilder areas. Their presence at the first sign of pest outbreak can mean significant savings from other more costly pest control measures. Insectivorous birds and bats, benefit from nesting and roosting habitat on or near farms, as do rodent-eating raptors. Bobcats, foxes, skunks, and coyotes need territories that stretch through many family farms as they help keep gophers, mice and ground squirrels in check. Supplying the needs of these larger predators also provides habitat for insect pollinators and predators. Organic farms are ideally suited to take advantage of nature's benefits and at the same time provide for and celebrate the biodiversity of the landscape.

NOP Rule
Subpart A – Definition
205.2 Organic Production
A production system that is managed in accordance with the Act and regulations to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.

Biological diversity (or biodiversity) "The variety of life forms and ecosystem types on Earth. Includes genetic diversity (i.e. diversity within species), species diversity (i.e. the number and variety of species) and ecosystem diversity (total number of ecosystem types)". IFOAM

The NOP Rule's preamble states:
We "have amended the definition of organic production to require that a producer must conserve biodiversity on his or her operation. The use of 'conserve' establishes that the producer must initiate practices to support biodiversity and avoid, to the extent practicable, any activities that would diminish it. Compliance with the requirement to conserve biodiversity requires that a producer incorporate practices in his or her organic system plan that are beneficial to biodiversity on his or her operation".

NOP Rule
Subpart A – Definition
205.2 Natural Resources of the Operation
The physical, hydrological, and biological features of a production operation, including soil, water, wetlands, woodlands, and wildlife.

NOP Rule
Subpart C – Organic Production and Handling
205.200 General. The producer or handler of a production or handling operation intending to sell, label, or represent agricultural products as "100 % organic," "organic," or "made with organic (specified ingredients or food group(s)" must comply with the applicable provisions of this subpart. Production practices implemented in accordance with this subpart must maintain or improve the natural resources of the operation, including soil and water quality.

All Things are Not Equal

When determining what biodiversity should be conserved, all things are not equal, and should not be given equal weight when balancing the changes which agriculture brings to the land. In other words, the loss of an eagle or a wetland is not balanced by the gain of a pigeon or a hayfield. Some species and communities, such as those that thrive in fragmented, simplified, human-dominated environments, are quite common and their numbers may even be enhanced by agricultural activities. Others may be uncommon, rare, or are key components of healthy ecosystems, and their well-being should be given more consideration in organic farming. Practices that foster these sensitive species and communities often involve conserving and restoring natural habitats, preventing the spread of invasive species, and providing wildlife linkages through the farm. The measure of success is not simply the number of plants, animals or natural communities in a given area, but whether the larger landscape as a whole achieves habitat and ecosystem conditions able to support viable populations of native species, particularly those most adversely affected by human disturbance.

Incorporating Biodiversity into the Organic System Plan

Since the NOP Rule requires each producer to develop an Organic System Plan (OSP), which is then used by certifiers during inspections, plans for biodiversity conservation naturally fit into this process. Guidance is provided on how to gather information, and plan for implementing practices which provide the highest returns in ecological services to the farming operation while supporting native species and ecosystems. For example, a good way to begin is to inventory and map the natural features on or near the farm, including topography, soils, water, cropped and non-cropped areas, land use, native plant and animal habitats and protected areas. Learn about the conservation priorities in the area, then analyze what actions are best for the farm and biodiversity by reviewing a set of practices and actions presented in the guides. Establish a monitoring plan, and periodically adjust the OSP as needed to benefit the farm and biodiversity.

Actions that Support Biodiversity

More than 80 biodiversity conservation practices are presented for cropped and non-cropped areas as well as for livestock management and wild harvest operations. The conditions and priorities for biodiversity conservation vary widely from region to region and watershed to watershed. Some of the practices and actions are broadly applicable across many regions and other examples are more specific. A farmer can adapt, modify or add to the practices to create a biodiversity conservation plan that is appropriate to the farm, the local watershed and to regional conservation goals. Under each conservation criteria practices are grouped in a continuum of three categories – high conservation value, moderate conservation value, and inconsistent with the federal organic rule – followed by language of the rule itself. Since there is such a wide variety of suggested practices, there is something for every farmer, from those who do not currently conserve biodiversity, to those who are far along in the continuum. By presenting indicators of high and moderate biodiversity compliance, along with noncompliance, the guides make the inspector's job easier to verify, evaluate and inform the applicant of compliance requirements, and to communicate to a certifying agency the farming practices that are contributing to or that are degrading biodiversity conservation.

Benefits & Incentives for Biodviersity

Farmers can save time and money, for instance, by maintaining or planting natives that support pollinators and other beneficial wildlife; displace weeds and eliminate expensive mowing, discing, and burning; and control erosion of valuable farmland. When helping conserve biodiversity in ways that do not interfere with farming, farmers can enjoy watching native plants and animals thrive from their efforts. Conserving natural resources will also help to gain wider public recognition and appreciation for the organic agriculture industry.

Funds are available through the federal Environmental Quality Incentive Program for many conservation and stewardship practices used by organic farmers that stop erosion, reduce water pollution, and use of native plants to attract beneficial native insect pollinators, predators and parasites. Other practices farmers may want to undertake, such as riverine or wetland restoration, may be funded by the Wildlife Habitat Incentive Program, Wetlands Reserve Program, or Partners for Fish and Wildlife Program. The farmer's guide includes these and other government and non-governmental organization programs that offer cost share, technical support and other forms of assistance to operators who wish to implement conservation practices.

Supporting Resources

The guides include multiple resources that make it easy to understand and implement conservation practices. A detailed glossary is provided along with listings of internet resources and groups that can give in-person help. For further investigation of biodiversity in agriculture, standards and guidelines of other organizations around the world are referenced, as are books and papers on research and technical practices. These guides and resources offer information, inspiration and support to help organic farmers and certifiers work together to conserve biodiversity.

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