

**National Organic Standards Board**  
**Certification, Accreditation and Compliance Subcommittee (CACS)**  
**Discussion Document**  
**Eliminating the Incentive to Convert Native Ecosystems to Organic Production**

**January 10, 2016**

## **I INTRODUCTION**

The Organic Foods Production Act (OFPA) of 1990 (as amended) and Regulations promulgated by the NOP to implement the statute, NOP policy documents, and NOSB recommendations and principles clearly establish that soil health, biodiversity and conservation of the ecosystem are critical components of organic agriculture. Over the last two years the NOSB has received public comment describing loss of high value conservation and fragile ecosystem acreage when farmers transition to organic production. The NOSB has been asked to review this issue and propose some incentives and disincentives to reduce conversion of high value conservation ecosystems.

When a producer submits an application for organic certification of their farm or wild crop harvesting they must provide detailed information on the previous three years of land use on the acreage to be certified as part of their Organic System Plan (OSP). Many farms convert lands from conventional agricultural use to organic agriculture. Where lands are converted from a wild, “non-productive” state the transition period may be eliminated. This can result in destruction of high value conservation lands and fragile ecosystems. Fallow land that had agricultural production in the past, such as land that is in the Conservation Reserve Program, would not be considered a high conservation value ecosystem, since it has been significantly changed from its native state.

This discussion document is intended to provide some background as a framework for seeking public comment from a wide cross section of stakeholders. The goal is to ascertain the scope of this unintended consequence of the three year transition, and to determine if the NOSB should recommend to the NOP a Rule change, Guidance or other mechanisms to address this issue.

## **II BACKGROUND**

There are about one billion acres of land in the US under agricultural production. Most of this acreage (over 99%) is in conventional agriculture. Agriculture, by its very nature, reduces biodiversity and fragments ecosystems.

Organic agriculture presently uses about 5.4 million acres in the U.S. The conservation of natural resources and biodiversity is a primary tenet of organic production. The NOP regulations define organic production as follows: “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.”

The NOP provided Guidance on Biodiversity in 2016 (NOP 5020) encouraging the protection and maintenance of a high level of biodiversity on a farm because it brings benefits not only to the entire ecosystem in that geographic area, but also to the farmer. For instance, native vegetation interspersed throughout a certified organic operation provides food, cover, and corridors for beneficial organisms such as pollinators, slows water down for erosion control and groundwater recharge, and filters pollution. Using practices that attract or introduce beneficial insects, provide habitat for birds and

mammals, and provide conditions that increase soil biotic diversity serve to supply vital ecological services to organic production systems. Advantages to certified organic operations that implement these types of production practices include: 1) decreased dependence on outside fertility inputs; 2) reduced pest management costs; 3) more reliable sources of clean water; and 4) better pollination (NOP 5020).

The National Organic Standards Board (NOSB), a federal advisory committee that advises the USDA on organic issues, has made multiple recommendations related to natural resources conservation and biodiversity. The May 2009 NOSB recommendation asked the NOP to establish: 1) consistent discussion and review of biodiversity protection and enhancement in all certified operations' organic system plans; 2) increased education and information for certified operations, inspectors, and certifiers; 3) uniformity of inspection and certification procedures with regard to how certified operations implement the biodiversity standards; 4) incorporation of biodiversity standards into the procedures for accreditation and certifier audits; and 5) use of materials evaluation criteria that foster consideration of biodiversity conservation when adding or deleting materials from the National List of Allowed and Prohibited Substances (NOP 5020).

Public comment submitted to the NOSB for its April 2016 meeting provided some observations on the unintended consequences of the three year transition requirement and its impact on previously unaltered or relatively unaltered ecosystems. Following are some examples of these comments:

*In the US, 1.6 million acres of grasslands older than 20 years were torn up, primarily for crop production between 2008 and 2012 (Lark, Salmon and Gibbs, 2015). The remaining prairie is often referred to as "marginal" land because it is not well-suited for crop production. Nevertheless, it is very productive for ranchers and for flood mitigation and erosion control.*

*NOP requires that, in order to transition to organic certification, lands must be free from pesticides for three years. Unfortunately, despite often being highly erodible, valuable prairie, historic oak woodlands or other diverse ecosystems, land that has not been plowed or previously planted is an easy target for those looking to quickly overcome NOP's three-year waiting period.*

*NOP's three-year waiting period for transitioning to organic production serves a critical purpose and it should be retained. However, I urge NOSB to recognize that the conversion of native ecosystems that have no cropping history to organic production is an unintended consequence of the requirement, and to develop regulatory language to discourage such conversion.*

*The required three-year transition before new organic farmers can realize the financial benefits of organic production is a major disincentive to the transition of chemical- intensive agriculture to organic agriculture and an incentive to turn natural ecological communities into organic farms. Therefore, we ask the CACS to focus heavily on incentivizing the transition to organic production while removing incentives to convert native land to organic farms.*

In summer 2016, The Wild Farm Alliance, working through the International Organic Inspectors Association (IOIA), and certifiers asked inspectors to share the degree to which they have seen new parcels and/or farms convert from natural habitat, (not old/fallow field or conventional) by asking following questions:

*Is this common? Growing? Do you regularly see it? Have you ever seen it?  
Where is it common or not? Are there good stories in this regard? Of all the new farms/acreage*

*you've seen in X period, what percent of ground was a natural ecosystem to organic conversion? Please ensure that you are describing generalities and are not naming any specific farms. In your response if you could describe natural ecosystems as unplowed grasslands, savannahs, woodlands/forests, and riparian areas/wetlands it would be appreciated.*

Here is a sample of inspector observations which were provided as part of public comment in response to these questions:

*There are a couple of areas that I have seen regular development...This summer I witnessed the tilling of native short grass prairie in the western Colorado Plains...to grow corn, milo and wheat. In most cases the farmers are conventional farmers who are trying their hand at organic agriculture since they don't have a conversion period...I would estimate the land witnessed in the last year would be 1000 acres in the Midwest.*

*These native prairies in Colorado also support animals like endangered black-tailed prairie dogs, and burrowing owls that have a "Species of Conservation Concern" designation. If the organic community (and agriculture as a whole) doesn't act to protect these ecosystems, more species will be listed as "Threatened" or "Endangered," increasing government expense and reducing private management of these habitats.*

*We see this all the time on the high desert-new hay pivots going in...from the native sagebrush rangelands between Bend and Vail and down to the Christmas valley, Fort Rock, Lake View, K Falls, etc.*

*I have seen quite a bit of this. First the Eastern Oregon region, (Burns OR) has a huge amount of sagebrush being converted to farmland. I think this has drastically reduced the migration patterns of certain animals (elk and deer) plus birds...*

*An organic inspector in Mexico commented on the conversion of native desert to cropland, and coastal sub-tropical scrub. "This is particularly prevalent in Baja California and on the coastal plains of Sinaloa (around Mazatlan and Culiacan) as well as the states of Michoacan and Guerrero. Chiefly the crops being planted are warm season vegetable crops like tomatoes, cucumbers and peppers.*

Other public comment included inspector observations from California, China and New Mexico.

### **III RELEVANT AREAS OF THE STATUTE, RULE and RELATED DOCUMENTS**

The Organic Food Production Act (OFPA) of 1990, as amended, 7 USC, Chapter 94:

7 USC 6504 (2) ...not be produced on land to which any prohibited substances, including synthetic chemicals have been applied during the 3 years immediately preceding the harvest of the agricultural products;

7 USC 6513(f) Management of wild crops; (2) include a 3 year history of the management of the area showing that no prohibited substances have been applied; (3) include a plan for the harvesting and gathering of wild crops assuring that such harvesting or gathering will not be destructive to the environment and will sustain the growth and production of the wild crop;

7 USC 6518 National Organic Standards Board,  
6518 (b) Board composition, (4) three shall be individuals with expertise in areas of environmental protection and resource conservation; (6) one shall be an individual with expertise in the fields of toxicology, ecology, or biochemistry;

The OFPA Preamble to the Final Rule establishing the NOP states: “[t]he use of ‘conserve’ [in the definition of organic production] 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.” (76 FR 80563)

7 CFR 205.2 Definitions:

Natural Resources of the operation: Physical, hydrological and biological features of a production operation, including soil, water, wetlands woodlands and wildlife.

Organic Production: production system that is managed to respond to site-specific conditions by integrating cultural, biological and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.

7 CFR 205.200 Producer ...must maintain or improve the natural resources of the operation, including soil and water quality.

7 CFR 205.202 Land requirements.

Any field or farm parcel from which harvested crops are intended to be sold, labeled, or represented as “organic” must:

(b) Have had no prohibited substances, as listed in 205.105, applied to it for a period of 3 years immediately preceding harvest of the crop;

NOP 5020, effective 1/15/16, Guidance, Natural Resources and Biodiversity Conservation.

16 USC 1531 et seq, Endangered Species Act.

NOSB Recommendation May, 2009, Implementation of Biodiversity Conservation in Organic Agriculture Systems. - “Conversion of native habitat to crop production has consequences to biodiversity that must be considered and the producer should discuss such planned conversion with his or her certifier before action is taken.”

NOSB Policy and Procedures Manual, Principles of Organic Agriculture Organic agriculture, adopted 2001, 1.1, Organic agriculture...is an ecological production management system that *promotes and enhances biodiversity*, biological cycles, and soil biological activity.

#### IV DISCUSSION

For over sixty years biogeographers and conservation biologists have documented and described with enormous concern the conversion of native ecosystems to agricultural production and have documented the status of biodiversity worldwide (see for example, Stein et al, 2000)<sup>1</sup> (see also National

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<sup>1</sup> Stein, B.A, J.S. Adams and L.S. Kutner, The Status of Biodiversity in the United States. Oxford University Press, New York, 2000.

Wildlife Federation website, 2017, [www.nwf.org/WildlifeThreats-toWildlife/Habitat-Loss.aspx](http://www.nwf.org/WildlifeThreats-toWildlife/Habitat-Loss.aspx)). There are immediate benefits in terms of agricultural production when new soils are first cropped, but over time the short term benefits from loss of biodiversity can lead to economic losses (see for example “Lost Landscapes and Failed Economies” (Powers, 1996)<sup>2</sup>). Habitat loss includes actual destruction by tree or ground cover removal and clearance, to habitat fragmentation and habitat degradation through ecosystem disruption.

The United Nations Environment Programme (UNEP) considers conversion of tropical natural areas to crops one of the main reasons for the continuing loss of biodiversity (UNEP, 2013<sup>3</sup>). The literature is replete with a large body of scientific research documenting for example loss of bird species as bird habitat is replaced with agricultural cropping (for example Stein et al, cited above and Firbank et al., 2008)<sup>4</sup>. It is clearly documented that crop pollination from native bees is at risk from loss of species diversity in croplands (Kremen et al, 2002<sup>5</sup>). Similarly we know that habitat eradication and cropland intensification reduces natural pest control in annual crop fields (Letourneau, 2015<sup>6</sup>). Many authors, such as Smuckler et al (2010<sup>7</sup>) have described the changes in biodiversity and multiple ecosystem functions in organic farmscapes.

The challenge is that human populations keep increasing and so does demand for food, and there are different perspective on soil and ecosystems. To the biogeographer and conservation biologist these are fragile ecosystems, complex gene pools of vitally important biodiversity critical to long term sustainability of human beings (see Haddad et al., 2015<sup>8</sup> for example). To others these are “unproductive” lands from which mankind can benefit through conversion to food, fibre or fuel. Both perspectives have validity and, as Garrett Hardin pointed out in 1968<sup>9</sup>, no stakeholder intended the negative ecological and environmental consequences which have taken place over time in some geographical areas.

There are thousands of organic farmers who are dedicated to soil conservation and high levels of biodiversity on their farms, but pressure is intense to convert more native and fragile ecosystems to agriculture for food, fibre and fuel (see for example Lark, 2015<sup>10</sup>). Research suggests that organic agriculture can have beneficial impacts on biodiversity - see for example Fuller et al., 2005<sup>11</sup>, and also

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<sup>2</sup> Power, Thomas Michael, *Lost Landscapes and Failed Economies*, Island Press, Washington DC, 2009.

<sup>3</sup> United Nations Environment Programme (UNEP) *Crop Expansion and Conservation Priorities in Tropical Countries*, 2013.

<sup>4</sup> Firbank et al., *Assessing the impacts of agricultural intensification on Biodiversity: A British Perspective*. Philosophical Transactions of the Royal Society, Biological Sciences, Feb. 2008.

<sup>5</sup> Kremen, C., N.M.Williams, and R.W. Thorp, *Crop pollination from Native Bees at Risk from Agricultural Intensification*. Proceedings of the National Academy of Sciences 99, No. 26 (December 24, 2002).

<sup>6</sup> Letourneau et al., *Habitat Eradication and Cropland Intensification May Reduce Parasitoid Diversity and Natural Pest Control Services in Annual Crop Fields*, *Elementa: Science of the Anthropocene* 3, No 1, 2015.

<sup>7</sup> Smukler et al., *Biodiversity and Multiple Ecosystem Functions in an Organic Farmscape*, *Agriculture, Ecosystems and Environment*, 139, No 1, 2010.

<sup>8</sup> Haddad, N.M., et al., *Habitat fragmentation and its lasting impact on earth's ecosystems*. *Science Advances*, 1 (2), 2015.

<sup>9</sup> Hardin, Garrett, *The Tragedy of the Commons*, Science, New Series, Vol. 162, pp 1243-1248, Dec .13, 1968.

<sup>10</sup> Lark, et al., *Cropland expansion outpaces agricultural and biofuel policies in the United States*. *Environmental Research Letters* 10, No 4, 2015.

<sup>11</sup> Fuller, R.J. et al., *Benefits of organic farming to biodiversity vary amongst taxa*. *Biology Letters*, 1(4), pp 431-434, 2005.

Bengtsson et al., 2005<sup>12</sup>.

### **NOP Guidance and International Standards**

The NOP provided Guidance in 2016 (NOP 5020) on Natural Diversity and Biodiversity, but the Guidance does not attempt to address conversion of native ecosystems. Indeed, one could argue that jurisdiction by the NOP does not attach to the organic producer until the producer has submitted his/her Organic System Plan pursuant to 7 CFR 205.202, and by then the conversion of lands has already taken place. And while the Guidance in NOP 5020 does clarify and provide considerable information on biodiversity protection and opportunities for assistance from Natural Resource Conservation Service (NRCS) etc., it does not seek to prevent further conversion of native ecosystems.

In contrast a review of international organic standards indicates that many other countries do provide clear language protecting native ecosystems. For example:

[Australian Certified Organic](#) - The clearing of primary forest and destruction of primary ecosystems on certified lands is not permitted. The clearing of primary forest and destruction of primary ecosystems on land intended for organic production prior to application for certification is also not permitted. (Sec. 4.6.9)

[Argentina's Argencert](#) – Section 1.2 and 2.0. No deforestation of primeval forests

[Bolivia's Bolicert](#)- Article 14, (f) Para garantizar la biodiversidad, está prohibido el laboreo en sotobosque y/o espacios de bosque alrededor de arroyos y/o riachuelos; en un área de protección según los casos específicos entre 10 y 50 m de franja de seguridad.

Article 14 ( n) La tumba y roza de bosque primario y/o suelos vírgenes, están prohibidos. Solo se podrá autorizar la habilitación de parcelas en bosque primario o suelos vírgenes cuando el plan de conversión garantice la conservación de áreas de bosque virgen para no afectar los ciclos naturales del ecosistema. See also Article 16.

[International Federation of Organic Movements \(IFOAM\)](#) - No conversion of high conservation value areas. Farming areas installed on land that has been obtained by clearing of High Conservation Value Areas in the preceding 5 years shall not be considered compliant with this standard. This applies to global scheme.

[New Zealand's AsureQuality Limited](#) - The clearing of primary forest and ecosystems or High Conservation Areas is prohibited (Sec. 4.5.1)

The NOP has Memoranda of Agreement and Equivalencies with several of the above listed countries.

Recent public comment also states that there are several non-organic international ecolabel standards which address this issue, such as:

- . Better Cotton Initiative - No conversion of natural habitat
- . Bonsucro - No conversion of high conservation value areas
- . Demeter USA - No clearing of virgin forest for agricultural usage. Must conserve areas of high ecological value.
- . Fairtrade International - No conversion of high conservation value areas

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<sup>12</sup> Bengtsson, J., et al., *The effects of organic agriculture on biodiversity and abundance; a meta-analysis*. Journal of Applied Ecology, 42 (2), pp 261-269, 2005.

- . Forest Stewardship Council - No conversion of high conservation value areas
- . Global Roundtable on Sustainable Beef - No conversion of high conservation value areas
- . Linking Environment and Farming - No conversion of biologically diverse areas
- . Rainforest Alliance - No conversion of natural areas

The certifiers listed above appear to verify their standards using a variety of methods, including satellite images, Google Earth, and old photographs of ecosystems. Aerial images help to show intact forests and grasslands versus row crops. Ground-truthing is required, and some accept affidavits from disinterested parties that have been submitted by the producer. USDA Farm Service Agency records and NRCS records can be used as documentation.

Certifiers listed above appear to use a range of definitions such as:

“High Conservation Value Areas” (HCVA),: Lands or aquatic environments that are habitat for vulnerable, threatened or endangered plant, mammal, bird, amphibian, reptile or other species as identified by the IUCN Red List, including the federal and state lists and those compiled by NatureServe;

A large landscape-level ecosystem which is significant at global, regional or national levels, and that contains viable populations of most of the naturally occurring species in natural patterns of distribution and abundance; rare ecosystems as protected by local law or defined by the IUCN Red List of Ecosystems. In the U.S., refer to NatureServe’s Terrestrial Ecological Systems of the United States;

Areas that provide critical ecosystem services (e.g. watershed protection or erosion control, and areas providing barriers to destructive fires).

To date the NOSB has not received detailed public comment on exactly how verification takes place. This Discussion document is intended to provide a general background in order to seek further, more detailed public comment.

### **The Organic System Plan:**

Certified organic operations and applicants for certification must develop and submit an organic system plan (OSP) to a certifier (7 CFR § 205.201). In the OSP, the operation must describe or list activities (plans, practices and enhancements) that explain how it will comprehensively conserve biodiversity by maintaining or improving all natural resources, including soil, water, wetlands, woodlands, and wildlife, as required by §205.200 of the regulations and per the §205.2 definition of natural resources of the operation. In many cases, the certifier will provide the operation with an OSP template with a designated section for the operation to describe its activities and its biodiversity monitoring approach (e.g., visual assessment of soil erosion, species counts for biodiversity, or testing for water quality).

The operation may refer to a current conservation plan and/or contract developed in conjunction with NRCS or other conservation agency or non-governmental organization as part of their OSP, to meet the requirements of 7 CFR. §205.200.

Organic crop and livestock producers who are located in the United States and its territories and who are planning to transition land to organic production may be eligible for technical and financial assistance through NRCS to develop and implement plans for addressing natural resource concerns. One option is to work with an NRCS certified outside vendor or Technical Service Provider (TSP), to complete a Conservation Activity Plan (CAP) 138. Organic producers who are approved for and complete a CAP

138 may submit to their certifiers the CAP 138 Resource Inventory section together with the necessary Resource Inventory Supplement(s). When submitted together, these documents contain all the required components of a complete OSP.

In the last year the NOP has worked closely with NRCS in order to ensure that soil and natural resource conservation measures are more easily understood and readily accessible to organic producers, and thus the ground work has been established to clearly protect high value and fragile ecosystems.

**In summary:**

Research literature indicates that conversion of native ecosystems to agriculture has negative impacts on biodiversity and, in the longer term, on economies. To what extent is such conversion of fragile ecosystems taking place in connection with transition to organic agriculture? Could this issue be addressed by adding additional clauses to 7 CFR 205.202 Land Requirements...for organic production, such as:

(d) Have not converted native ecosystems or high value conservation lands to agricultural production in the last 5 years.

(e) Will actively monitor and where possible improve plant and animal biodiversity on the farm, and will not convert native ecosystems or high value conservation lands to agricultural use in future.

**V REQUEST FOR PUBLIC COMMENT**

1. Please provide specific data on the occurrences of organic agricultural conversion of high value lands or fragile ecosystems.
2. What definition of high value conservation land or fragile ecosystem should be used?
3. How can high value land and fragile ecosystems best be protected under in USDA organic certification. Should the NOP issue Guidance on conversion of high value land, or fragile ecosystems? Should a Rule change, such as an addition to 7 CFR 205.202 be recommended in order to address conversion of high value lands or fragile ecosystems?
4. What incentives, and/or disincentives could be implemented within current USDA organic regulations to prevent the conversion of high value land and fragile ecosystems?
5. Should there be an extended waiting period for land seeking organic certification that has recently been converted from high value land or fragile ecosystems? If so, what duration should the waiting period be and why?

**Vote in Subcommittee**

Motion to approve this discussion document for posting for the spring 2017 NOSB meeting

Motion by: Jean Richardson

Seconded by: Harriet Behar

Yes: 6 No: 0 Abstain: 0 Absent: 1 Recuse: 0

**Approved by Scott Rice, Subcommittee Chair, to transmit to NOSB January 10, 2017**