

October 2, 2017

The Honorable Ryan Zinke, Secretary  
Department of the Interior  
1849 C Street, N.W.  
Washington DC 20240

Dear Secretary Zinke,

We are a group of independent scientists joining with the Information Technology and Innovation Foundation, an independent think tank focused on innovation and public policy, writing to bring your attention to, and to ask you to reverse, a policy improperly adopted by the Fish and Wildlife Service three years ago that runs counter to its mission.<sup>1</sup>

On July 17, 2014, the Chief of the National Wildlife Refuge System (NWRS) made public a memo through which the use of “genetically modified” seeds to raise crops to feed wildlife was to be phased out as of January, 2016, as well as any use of neonicotinoid pesticides.<sup>2</sup>

While this action has been criticized by scientists who specialize in this field, it has not been widely noted.<sup>3</sup> It would appear to be a major federal action that should have been adopted through a notice-and-comment rulemaking process under the Administrative Procedure Act.<sup>4</sup> But even setting aside this apparent procedural irregularity, the policy is at odds with the conservation objectives of the NWRS, which has a long and

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<sup>1</sup> The Information Technology and Innovation Foundation (ITIF) is a nonpartisan think tank whose mission is to formulate and promote public policies to advance technological innovation and productivity internationally, in Washington, and in the states, and around the world. Recognizing the vital role of technology in ensuring prosperity, ITIF focuses on innovation, productivity, and digital economy issues, with policies impacting biotechnology and biological sciences as a core concern.

<sup>2</sup> Memorandum from James W. Kurth, Chief of the National Wildlife Refuge System, to Regional Refuge Chiefs, Regions 1-8, Regarding “Use of Agricultural Practices in Wildlife Management in the National Wildlife Refuge System,” July 17, 2014, [http://www.centerforfoodsafety.org/files/agricultural-practices-in-wildlife-management\\_20849.pdf](http://www.centerforfoodsafety.org/files/agricultural-practices-in-wildlife-management_20849.pdf).

<sup>3</sup> L. Val Giddings, “GMOs, Neonicotinoids, and Aldo Leopold’s Land Ethic: The Fish & Wildlife Service Brings a ‘Whole Foods’ Approach to Wildlife While Shooting Itself in Our Foot,” Information Technology and Innovation Foundation, *Innovation Files*, October 21, 2014, <https://www.innovationfiles.org/gmos-neonicotinoids/>.

<sup>4</sup> Public Law 404, June 11, 1946, <http://www.legisworks.org/congress/79/publaw-404.pdf>

praiseworthy history of welcoming innovation in management practices for the betterment of wildlife and the environment.<sup>5</sup> It should be reversed.

The optimal methods of agricultural production on refuge lands devoted to that purpose are those that produce the maximum sustainable yields with the minimum environmental impact. Obsolete production methods, no matter how innovative they might have been thousands of years ago, are not, today, “green” in any sense.<sup>6</sup> They produce vastly less than modern techniques, requiring much more land to produce the same harvest, thus consuming far more space that could otherwise be directly allocated for wildlife habitat than modern varieties. The superiority of modern crop varieties (e.g., genetically modified organisms or GMOs) in this regard has been demonstrated time and time again.<sup>7</sup> The prohibition of “genetically modified” crops is a wrong-headed and anti-environmental policy, and the conceit that it is being advanced out of respect for a “land ethic” is indefensible.

That the use of “genetically modified” has been forbidden by the NWRS chief is arbitrary and capricious on several grounds, starting with the fact that all seeds are genetically modified, both through historical processes of domestication and crop improvement, to say nothing of the universal process of descent with genetic change that is the *sine qua non* of all life on earth. The term “GMO” is inaccurately and wrongly used to stigmatize a subset of seeds produced with the most modern, precise, efficient and effective methods of seed improvement. This is inconsistent with the scientific consensus.<sup>8</sup> The Chief’s proscription of the use of such seeds appears to be based on an unsupported assumption of potential negative consequences to wildlife

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<sup>5</sup> U.S. Fish and Wildlife Service, “History of the National Wildlife Refuge System,” <https://www.fws.gov/refuges/history/index.html>; Juliet Lamb, “The History of the National Wildlife Refuge System,” *JSTOR Daily*, February 4, 2016, <https://daily.jstor.org/history-national-wildlife-refuge/>.

<sup>6</sup> Bill O’Brien, “Hardy Corn with Deep (Cultural) Roots,” USFWS, NWRS website, March 4, 2012, [https://www.fws.gov/refuges/RefugeUpdate/MarApr\\_2012/hardycorn.html](https://www.fws.gov/refuges/RefugeUpdate/MarApr_2012/hardycorn.html).

<sup>7</sup> Graham Brookes and Peter Barfoot, “Environmental Impacts of Genetically Modified (GM) Crop Use 1996–2015: Impacts on Pesticide Use and Carbon Emissions,” *GM Crops & Food*, Volume 8, 2017 - Issue 2, Pages 117-147, <http://www.tandfonline.com/doi/abs/10.1080/21645698.2017.1309490>; and Wilhelm Klümper and Martin Qaim, “A Meta-Analysis of the Impacts of Genetically Modified Crops,” *PLoS ONE* 9(11): e111629. doi:10.1371/journal.pone.0111629, <http://journals.plos.org/plosone/article?doi=10.1371/journal.pone.0111629&type=printable>.

<sup>8</sup> Giovanni Tagliabue, “The Necessary ‘GMO’ Denialism and Scientific Consensus,” *J. Science Communication* 15(04) 2016, [https://jcom.sissa.it/sites/default/files/documents/JCOM\\_1504\\_2016\\_Y01.pdf](https://jcom.sissa.it/sites/default/files/documents/JCOM_1504_2016_Y01.pdf).

conservation and biodiversity that is robustly contradicted by data and experience.<sup>9</sup> As numerous expert bodies have found, and as has been corroborated by vast experience, the safety of these seeds is clear and the beneficial impacts on agricultural sustainability significant.<sup>10</sup>

As for the Chief's arbitrary ban on the use of neonicotinoid pesticides, if the purpose of growing a crop is to produce a harvest sufficient directly to nourish, for example, migratory waterfowl, then their use to optimize productivity of seeds treated with pesticides that are less toxic than their predecessors or alternatives would seem to be logical, praiseworthy, and essential good stewardship of the land. The NWRS Chief cited concerns over potential impacts on non-target species, so let us consider that. We know neonics are kinder to birds and vertebrates than the alternatives. But what about endangered insects?

Some have made the argument that neonics may be contributing to declines in some threatened native prairie butterfly populations in the Great Lakes region. This argument is made in a webinar featuring Lisa Williams, the Branch Chief for Environmental Contaminants in the East Lansing Field Office of the U.S. Fish and Wildlife Service.<sup>11</sup> Dr. Williams sees a correlation between areas of neonic use and the habitat distribution and declining numbers over time of the Poweshiek Skipperling and the Dakota Skipper, both candidates for listing as endangered species. She argues from this correlation that neonics should thus be banned from use throughout the NWRS.

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<sup>9</sup> Klümper and Qaim, "Meta-Analysis of Impacts of GM Crops; National Academies of Sciences, Engineering, and Medicine, 2016," *Genetically Engineered Crops: Experiences and Prospects*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/23395>, <https://www.nap.edu/catalog/23395/genetically-engineered-crops-experiences-and-prospects>; William Saletan, "Unhealthy Fixation: The War Against Genetically Modified Organisms Is Full of Fearmongering, Errors, and Fraud-Labeling. Labeling Them Will not Make You Safer," July 15, 2015, *Slate*, [http://www.slate.com/articles/health\\_and\\_science/science/2015/07/are\\_gmos\\_safe\\_yes\\_the\\_case\\_against\\_them\\_is\\_full\\_of\\_fraud\\_lies\\_and\\_errors.html](http://www.slate.com/articles/health_and_science/science/2015/07/are_gmos_safe_yes_the_case_against_them_is_full_of_fraud_lies_and_errors.html); A. Nicolia, A. Manzo, F. Veronesi, et al., "An Overview of the Last 10 Years of Genetically Engineered Crop Safety Research," *Crit Rev Biotechnol*. 2014 Mar;34(1):77-88. doi: 10.3109/07388551.2013.823595. Epub 2013 Sep 16, <https://www.ncbi.nlm.nih.gov/pubmed/24041244>.

<sup>10</sup> Brookes and Barfoot, *ibid*; Alison L. Van Eenennaam, and A. E. Young, "Prevalence and Impacts of Genetically Engineered Feedstuffs on Livestock Populations," *J. Anim. Sci.*, 2014, 92:4255-4278. doi:10.2527/jas.2014-8124, <https://www.animalsciencepublications.org/publications/jas/articles/92/10/4255>; Daniel Norero, "More Than 280 Scientific and Technical Institutions Support the Safety of GM Crops," June 19, 2017, *Si Quiero Transgenicos*, <http://www.siquierotransgenicos.cl/2015/06/13/more-than-240-organizations-and-scientific-institutions-support-the-safety-of-gm-crops/>.

<sup>11</sup> U.S. Fish & Wildlife Service, "Neonicotinoid Insecticides: Increasing Usage and Potential Threats," April 29, 2014, <https://digitalmedia.fws.gov/cdm/ref/collection/video/id/1923>

As Williams herself admits, this is an argument from correlation, and better data are needed to establish cause and effect. But even if we suppose such data exist, or can be produced, they could not justify a system-wide ban. The National Wildlife Refuge system is vast, involving all 50 states and territories. The butterflies of interest, though once more widespread, are now limited to relics of prairie habitat in a small portion of the country, the remainder of which is outside the historical range of the species of concern and throughout which very different conditions apply. A blanket neonic ban makes no sense, and cannot be justified.

We therefore ask that the Department of Interior vacate the NWRS Chief's policy decision to prohibit the use of "GM" seeds on refuge lands and instead to use them wherever improved agricultural productivity and sustainability would contribute to the Agency's conservation mission. We ask also that the blanket ban on neonicotinoid treated seed be rescinded, and a case by case evaluation be instituted that would allow for their use except where they pose a credible threat to endangered species.

Sincerely,

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