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May 18, 2022

VIA ELECTRONIC FILING ([www.regulations.gov](http://www.regulations.gov))

The Honorable Michael Regan  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460  
ATTN: Docket EPA-HQ-OAR-2021-0845

**Re: Renewable Fuel Standard Program: Canola Oil Pathways to Renewable Diesel, Jet Fuel, Naphtha, Liquified Petroleum Gas and Heating Oil, 87 Fed. Reg. 22,823 (Apr. 18, 2022)**

Dear Administrator Regan:

The U.S. Canola Association (USCA) appreciates the opportunity to submit these comments on the U.S. Environmental Protection Agency's (EPA's) proposed rule entitled "Renewable Fuel Standard Program: Canola Oil Pathways to Renewable Diesel, Jet Fuel, Naphtha, Liquified Petroleum Gas and Heating Oil," published at 87 Fed. Reg. 22,823 (Apr. 18, 2022). The proposal is in response to a petition USCA filed in March of 2020, which supplements a request the industry made in 2010 for approval of canola oil as a feedstock for biomass-based diesel production under the Renewable Fuel Standard (RFS) program. We are pleased to see the updates made by EPA to its modeling for canola oil and appreciate EPA acting on the request to include renewable diesel fuel advanced biofuel pathways for canola oil. We thank EPA staff for their efforts on USCA's request. In short, we agree that renewable diesel, jet fuel, heating oil, naphtha, and liquified petroleum gas (LPG) derived from canola/rapeseed oil via a hydrotreating process would meet the lifecycle greenhouse gas (GHG) emissions reduction threshold of 50 percent required to qualify as advanced biofuel and biomass-based diesel under the RFS. We believe canola oil provides a viable, alternative feedstock for renewable diesel production that can provide significant and real reductions in GHG emissions from the transportation fuel sector today. As such, we urge EPA to prioritize its approval of canola renewable diesel fuels and finalize the proposed pathways as soon as possible.<sup>1</sup>

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<sup>1</sup> Throughout these comments, "renewable diesel" or "renewable diesel fuels" may be used to refer to all the fuels covered by EPA's proposed pathways.

The USCA is a non-profit commodity organization consisting of grower, industry and end user members whose mission is to promote and encourage the establishment and maintenance of conditions favorable to the production, marketing, processing and use of canola in the United States. Canola is an important feedstock that furthers sustainable agricultural practices, and canola oil, as a biofuel feedstock, provides certain benefits for cold weather use over other similar feedstocks. Consistent with Congress's intent, canola renewable diesel fuels provide significant benefits to our national energy security, the environment, and the economy.

A. Canola Oil is an Ideal Feedstock for Biofuel Production.

In the United States, canola oil is currently one of the most effective and efficient sources for biodiesel production with excellent cold-flow properties. Plus, canola seed yields about 45 percent oil when crushed compared to only 18 percent for soybean oil. Canola oil also can be processed into renewable diesel and sustainable aviation fuel, as well as naphtha and LPG as co-products from these processes. These fuels are cleaner-burning alternatives to petroleum fuels that can replace or be blended with diesel fuel for use in on-road vehicles, including municipal fleets, long-haul trucks, and off-road equipment used in agriculture and other industries.

Canola also contributes to sustainable agriculture in numerous ways.

- Healthy, affordable canola oil and protein contribute to global food security.
- Canola and no-till production systems sequester carbon, enhance biodiversity, and produce more per acre than ever before.
- Canola contributes to soil health and water quality by enabling conservation tillage, which preserves topsoil and organic matter and stores carbon and nutrients in soil.
- Canola reduces GHGs in the atmosphere by sequestering carbon.
- Conservation tillage significantly reduces farm fuel use each year.
- Modern genetic traits in canola, such as herbicide tolerance and disease resistance, as well as innovations in crop protection and nutrient management, enable farmers to produce more with less inputs.
- Canola fields provide habitat for beneficial insects such as bees, butterflies, wasps, beetles, spiders and other arachnids. Farmer practices, such as crop rotation and field scouting, help protect these allies.<sup>2</sup>

According to EMTS Renewable Identification Number (RIN) generation data, EPA reports there was 62 million gallons of U.S. renewable diesel production in 2011 that has grown to almost 850 million gallons in 2021. As a result of the petroleum refinery conversions and new construction of renewable diesel production facilities, the U.S. Energy Information Administration expects U.S. renewable diesel production capacity to nearly triple by the end of 2023 from current production capacity: "If all projects come online as intended, U.S. renewable diesel production would total 5.1 billion gal/y (330,000 b/d) by the end of 2024."<sup>3</sup> Existing or planned facilities are or will be located in California, Kansas, Louisiana, Montana, North Dakota, Nevada, New Mexico, Oklahoma, Oregon, Texas, Washington, and Wyoming. Canola is currently grown or

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<sup>2</sup> Although EPA properly does not address the Endangered Species Act in this proposal, we are aware that whether EPA is required to consider impacts on endangered species when it approves pathway petitions has been raised previously. As explained in Appendix A to these comments, the Endangered Species Act is not applicable here.

<sup>3</sup> <https://www.eia.gov/todayinenergy/detail.php?id=48916> (July 29, 2021).

can be grown in or near most, if not all, of these states, with most U.S. production occurring in North Dakota and Montana.<sup>4</sup>

Yet, despite these benefits, canola oil is not likely to be used for renewable diesel production at all until EPA approves pathways for the generation of RINs.<sup>5</sup> As such, throughout the petition process, USCA has received support for the proposed pathways from stakeholders all along the fuel supply chain—feedstock growers, oil processors, renewable diesel producers, and obligated parties.<sup>6</sup> USCA has urged EPA to issue the proposed pathways as a “win-win” for farmers, producers, consumers, and the environment.

B. EPA Properly Proposes to Determine that Canola Oil Renewable Diesel Meets the 50% Lifecycle GHG Emissions Reductions Threshold for Advanced Biofuels under the RFS.

USCA and its members support EPA’s proposal. It submits the following responses to EPA’s requests for comment.

1. *EPA appropriately uses updated data to revise its modeling results for canola oil.*

EPA conducted FASOM and FAPRI modeling to assess agricultural emissions for feedstock production in 2010 when it finalized a pathway for canola biodiesel.<sup>7</sup> While EPA found that the 50 percent threshold was met for canola biodiesel, USCA identified various aspects of that modeling and the results that we believed to be inconsistent with real world evidence, counter to EPA’s analyses for other feedstocks, and erroneous.<sup>8</sup> As such, in submitting its petition for renewable diesel fuel pathways, USCA outlined various adjustments that should be made regarding the lifecycle GHG emissions assessment, which would result in substantially greater GHG emissions reductions associated with the feedstock production process than EPA found in 2010. Rather than make these proposed adjustments, EPA updated its inputs and assumptions for canola in its modeling. We believe this is a proper approach where there are no current pathways for use of canola oil for renewable diesel, naphtha, LPG, or jet fuel. Indeed, as more than ten years has passed since EPA conducted the modeling for canola oil biodiesel, it would be arbitrary for EPA to continue to rely on modeling results that real world experience has established to be significantly overestimated, which could unduly prohibit a clearly advanced biofuel such as canola oil renewable diesel, from contributing to the RFS program. It also would

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<sup>4</sup> More research is also being conducted that could further expand production of canola in the United States. *See, e.g.,* Kay Ledbetter, *Canola may help High Plains dairies fill spring forage gap*, Texas A&M AgriLife Today, Feb. 14, 2022, <https://agrilifetoday.tamu.edu/2022/02/14/canola-may-help-high-plains-dairies-fill-spring-forage-gap/?msclid=349ebb7ccfb11ecae222401d2461e69>.

<sup>5</sup> Most renewable diesel production facilities came online after 2007, making the grandfather provision inapplicable to even generate a D6 RIN under the RFS program.

<sup>6</sup> Letters noting the support of numerous companies are attached to these companies under Appendix B.

<sup>7</sup> EPA also used an earlier version of the GREET model, which, as EPA’s proposal notes, has been updated. The prior version of GREET did not include a land use model, leading EPA to utilize the FAPRI and FASOM models to assess domestic and international GHG agriculture emissions. Although GREET now incorporates land use, the USCA petition did not ask EPA to change its models, but rather to update its assumptions and data. While we believe EPA has authority to determine whether the 50 percent reduction requirement is met based on the qualitative review outlined in the petition, we believe EPA’s proposal to use updated data and assumptions and rerun its prior models is reasonable. Nonetheless, we note that lifecycle modeling has continued to evolve since 2010.

<sup>8</sup> Although USCA previously requested EPA update its modeling for canola biodiesel and revise its determination of a 50.5 percent GHG emissions reduction, we do not make that request as part of the petition process. We do note, however, that EPA has engaged in a separate process to review its lifecycle modeling for biofuels, presenting a workshop on February 28 and March 1, 2022. We support EPA’s efforts in this regard.

undermine the goals of Congress to promote diversification of feedstocks, which we believe would facilitate compliance with the RFS volume requirements as well as support energy security.

It is important to recognize that EPA need only determine if the 50 percent threshold is met to constitute an advanced biofuel, not that EPA definitively identify the GHG emissions for these fuels. EPA's analysis using updated input data and revised assumptions estimates:

- Renewable diesel produced from canola oil using the hydrotreating process reduces lifecycle GHG emissions by 63 to 69% compared to the diesel fuel baseline;
- Co-products Naphtha and LPG reduces lifecycle GHG emissions by 64 to 69% and 63 to 69%, respectively; and
- Jet fuel produced from canola oil using the hydrotreating process reduces lifecycle GHG emissions by 59 to 67%.

Indeed, EPA conducted various scenarios in light of the uncertainty inherent in the models used, which show that emissions reductions could be as high as 80 percent for these fuels. As EPA notes throughout the proposal, even here, it is using conservative assumptions that would indicate the GHG emissions reductions associated with canola oil as a biofuel feedstock could be even greater than EPA uses in its proposal.

2. *EPA should finalize the proposed pathways for canola oil in 40 C.F.R. §80.1426.*

EPA is proposing to modify rows G, H and I in Table 1 of 40 C.F.R. §80.1426 to add pathways for canola oil<sup>9</sup> renewable diesel, jet fuel, naphtha, and LPG, as well as expand canola oil heating oil to be produced via hydrotreating. This approach would allow any biofuel producer that uses the hydrotreating production process listed to utilize canola oil as a feedstock for generation of RINs. EPA has considered a range of emissions estimates for renewable diesel<sup>10</sup> and jet fuel production to support adding these general pathways, which can account for differences in the hydrotreating process at different facilities. EPA, nonetheless, also allows facility-specific pathway petitions to rely on EPA's analysis for these pathways to provide companies with flexibility to seek facility specific pathways where they may have proprietary technology to produce renewable diesel fuels. We support EPA's proposed approach.

Codifying the pathways is preferable to other approaches EPA has taken that would still require company-specific requests to utilize canola oil. We understand the resource constraints EPA may have in processing numerous petition requests, which can lead to delays in processing petitions. We also believe it may be confusing to renewable diesel producers if they were required to submit separate company-specific petitions to use canola oil while biodiesel producers are not required to do so. We note that EPA has identified less than a handful of facilities that have submitted such petitions for feedstocks that EPA has found are eligible to generate advanced biofuel RINs but did not include pathways in Table 1 (such as carinata and cottonseed oil). This illustrates that such a requirement would create an obstacle for renewable diesel producers to use

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<sup>9</sup> EPA treats rapeseed oil similar to canola oil. While we do not take issue with EPA's approach, our comments focus on canola. It is important to note, however, that there is limited production of rapeseed in the United States and that rapeseed oil in the United States is used for industrial purposes only due to the higher erucic acid content compared to canola oil. As such, we believe, for U.S. rapeseed production, EPA's analysis for canola oil is likely high and, thus, it is reasonable to include U.S. rapeseed oil as a viable feedstock under the RFS program.

<sup>10</sup> Naphtha and LPG are co-products from the production of renewable diesel and jet fuel.

canola oil that would not place canola oil on equal footing with soybean oil for which it is largely interchangeable in the market, undermining a key purpose for USCA to submit this petition. As such, we agree that adding pathways to the table is best way to effectuate these pathways.<sup>11</sup>

3. *While we believe the RFS market, which has used canola oil for biodiesel for over ten years, fully understands the meaning of “canola oil,” we do not necessarily oppose EPA’s proposed definition.*

Canola oil has been an approved feedstock for biodiesel since 2010. Canola is well-known and highly regulated due to the use of canola oil in the vegetable oil market. It is unclear why EPA believes adding a definition now provides any benefit to the market. Moreover, while EPA uses the scientific name for some crops, it also has used common names, such as soybean oil, without definition. Nonetheless, we do not oppose EPA’s proposed definition so long as EPA makes clear that the definition is only intended to identify the commonly used distinction between canola oil and rapeseed oil and does not add any requirements to users of canola oil.<sup>12</sup>

EPA proposes to define Canola/Rapeseed oil to mean either of the following:

- (1) *Canola oil is oil from the plants *Brassica napus*, *Brassica rapa*,<sup>13</sup> *Brassica juncea*, *Sinapis alba*, or *Sinapis arvensis* which typically contains less than 2 percent erucic acid in the component fatty acids obtained.*
- (2) *Rapeseed oil is the oil obtained from the plants *Brassica napus*, *Brassica rapa*, or *Brassica juncea*.*

Because of the specific traits being sought, there is substantial research into appropriate cultivars for use in canola production. It is the traits that distinguish canola, as opposed to any particular plant species. Moreover, canola is regulated by other federal agencies, and agricultural production is regulated by the States, not EPA. Other federal regulations have referred to the genus *Brassica* more broadly when referring to canola.<sup>14</sup> Nonetheless, the proposed definition identifies the main species used in production and for cultivars used in the United States (*i.e.*, *Brassica napus*, *Brassica rapa*, *Brassica juncea*) that meet the definition of canola and correctly notes the key distinction between canola oil and rapeseed oil as used in the United States being

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<sup>11</sup> Although we understand this requires a rulemaking process, which EPA is undertaking, we do not agree that the proposal represents a significant regulatory action for purpose of requiring interagency review, which can slow down the regulatory process. We appreciate that the Office of Management and Budget conducted its review within the 90-day timeframe provided in Executive Order 12866 and urge EPA either to remove this designation or ensure that the interagency process does not unduly delay the final approval of these pathways.

<sup>12</sup> For certain feedstocks, EPA’s regulations outline additional requirements that biofuel producers must follow, such as for *Arundo donax*. EPA does not propose any additional requirements for canola oil here. However, we are aware that EPA has tended to require quality assurance providers to add elements to their plans to trace feedstock sources and use that are not written in the regulations. We do not believe that farmers, canola oil processors or biofuel producers should be subject to any additional requirements merely to confirm that the canola oil meets the definition in the regulations. It is not EPA’s role to regulate seed production or use or harvest management.

<sup>13</sup> It should be noted that *Brassica campestris* is a synonym for *Brassica rapa*, with *Brassica rapa* being the favored name. See USDA, Plants Database, *Brassica rapa* L. var. *rapa* (field mustard), Synonyms, <https://plants.sc.egov.usda.gov/home/plantProfile?symbol=BRRAR> (last visited May 17, 2022).

<sup>14</sup> See, e.g., 7 C.F.R. §457.161; 7 C.F.R. §810.301. Where *Brassica* is a broad category of plants, this could be clarified to apply to “oilseeds” of the genus *Brassica* that are commonly referred to as “canola.”

the low level of erucic acid in the oil.<sup>15</sup> The listed *Sinapis* species also have been considered and could be used for canola production and, thus, EPA properly includes these species as well.<sup>16</sup>

4. *With respect to invasiveness concerns, EPA properly does not include risk management measures as part of the canola oil renewable diesel fuel pathways.*

EPA requests comments on its decision not to include risk management practices to address invasive species concerns. EPA found that “Canola is an established feedstock with 89 million acres planted in over 30 countries in 2020.” 87 Fed. Reg. at 22,826. EPA further states that it does “not believe canola is an invasive species as defined in E.O. 13112.” *Id.* We agree.

While we do not agree that EPA is authorized to consider or regulate for invasiveness concerns under the RFS program, USCA addressed this issue in its petition, including submitting an expert opinion regarding the lack of invasiveness concerns for canola. EPA-HQ-OAR-2021-0845-0040 at 39-41; EPA-HQ-OAR-2021-0845-0017. Moreover, current management practices are sufficient to address any concerns regarding the potential for canola to escape production areas. Indeed, proper harvest management is key to maximizing canola yields and returns throughout the growing season. Harvest management for canola is relatively easy and inexpensive.

Notwithstanding Executive Order 13112, EPA’s previous claimed authority to consider invasiveness concerns as part of the pathway process has been that mitigation efforts could result in indirect GHG emissions associated with the feedstock’s production. 78 Fed. Reg. 41,703, 41,709 (July 11, 2013). Although EPA did not quantify such emissions in those cases, there is simply no basis to assert that invasiveness concerns could lead to any additional, indirect GHG emissions related to canola, much less “significant” emissions. Thus, EPA properly did not include risk management measures to address potential invasiveness concerns as part of its proposed pathway approval and should not do so in its final approval.<sup>17</sup>

5. *EPA properly has determined that renewable diesel, heating oil, jet fuel, naphtha, and LPG derived from canola oil using the hydrotreating process provides at least 50% reduction in lifecycle GHG emissions.*
  - a. *Pathway approval is necessary to allow canola oil to be available as an alternative feedstock for renewable diesel production.*

For its shock scenario, EPA assumed 200 million gallons of canola oil renewable diesel from a 1.53-billion-pound increase in canola oil production. 87 Fed. Reg. at 22,828. The 200 million gallons is within the range USCA estimated for potential production of renewable diesel from canola oil. EPA-HQ-OAR-2021-0845-0040 at 8-10. We believe it to be a reasonable, if not conservative, scenario.

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<sup>15</sup> For a discussion on the history of canola seed development, see Canola Encyclopedia, *History of canola seed development*, <https://www.canolacouncil.org/canola-encyclopedia/history-of-canola-seed-development/> (last visited May 17, 2022).

<sup>16</sup> See USCA, *Canola Growers’ Manual*, at 4 (2008), [https://www.uscanola.com/wp-content/uploads/2019/07/Canola\\_Grower\\_Manual\\_FINAL\\_reduce.pdf](https://www.uscanola.com/wp-content/uploads/2019/07/Canola_Grower_Manual_FINAL_reduce.pdf). Some species may be synonyms of *Brassica* species, such as *Brassica alba* (white mustard). See USDA, Plants Database, *Sinapis alba* L. (white mustard), Synonyms, <https://plants.sc.egov.usda.gov/home/plantProfile?symbol=SIAL5> (last visited May 17, 2022).

<sup>17</sup> Indeed, any attempts to do so would require additional rulemaking and proper notice and comment.

We believe canola oil will remain primarily targeted for the food markets, with only excess canola oil going toward biofuel production. Providing this alternative market gives farmers greater incentives to grow more canola with the knowledge that there will be a market for surplus production. Considering similar dynamics, USCA’s estimate was based on the percent production of biodiesel that was produced from canola oil, because this can serve as an indication of how much canola oil may be put toward renewable diesel production. As explained in the petition, canola oil biodiesel RIN generation has ranged from 4 to 11 percent of total biomass-based diesel RIN generation since 2011.<sup>18</sup> According to EMTS data, average annual production of biodiesel from canola oil over the last five years was around 215 million gallons out of approximately 2 billion gallons of total biodiesel production under the RFS. Including heating oil and jet fuel, renewable diesel production was around 975 million gallons in 2020 and 1.3 billion gallons in 2021. While renewable diesel production capacity is expected to increase substantially in the United States in the next several years, production remains below that for biodiesel. As these volumes remain below U.S. biodiesel production, 200 million gallons is likely at the high end of use of canola oil for renewable diesel production.

We also note that the canola production required to produce 200 million gallons can be met simply by increasing use of canola as a rotational crop and decreasing fallow lands in the United States. Based on the formula in the petition, the required additional production acres of canola would be substantially less than the 3.3 million acres of summer fallow area that was estimated in North Dakota and Montana alone based on the 2017 U.S. Census of Agriculture, which counts all farms and ranches every five years.<sup>19</sup> EPA-HQ-OAR-2021-0845-0040 at 26.<sup>20</sup> This increase could also be met through an increase in canola yield.

While the models may predict land use change, including some pasture conversion to cropland as a result of increased canola production, EPA’s economic models attempt to predict how the market will react and numerous factors affect supply and demand. We do not agree that such changes are inevitable and, since the RFS program began, there simply has been no evidence of new land clearings for biofuel production. The economic incentives for farmers would be to increase use of canola as a rotational crop, not to convert pastureland. Other market dynamics, even if they do result in a loss of pastureland, are outside their control.<sup>21</sup> Importantly, the RFS program restricts feedstocks used to planted crops from agricultural land existing in 2007.

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<sup>18</sup> Canola oil biodiesel represented around 8.5 percent of the biomass-based diesel RINs generated in 2020 (383 million RINs or 255 million gallons) and 7.9 percent in 2021 (385 million RINs or 257 million gallons).

<sup>19</sup> Two hundred million gallons of canola renewable diesel would require about 1.1 million tonnes of canola seed, as shown in the following formula:

$$200 \text{ million gallons} * 6.5 \text{ lb/gal} * 0.8 \text{ lb RD/lb canola oil} / 0.43 \text{ lb oil/lb canola} / 2205 \text{ lb canola/tonne seed} = 1,096,873 \text{ tonnes seed.}$$

At a yield of 2.25 tonnes/ha, the required production area is 487,499 ha or approximately 1.2 million acres.

<sup>20</sup> The USDA Farm Services Agency (FSA) reports annual crop estimates based on reports from participating farmers. According to crop acreage data reported to the FSA, there were almost 9 million acres of fallow land in 2021, with over 2.2 million in the main canola producing states—Montana, North Dakota, Idaho, Oregon and Washington.

<sup>21</sup> We note that EPA’s models predict a loss of pastureland due to a decrease in demand for grazing, where such lands would be converted to *forestland*, which serve as carbon sinks. 87 Fed. Reg. at 22,832. This pastureland would already have been in production and, thus, should not be disturbing species habitat. We do not see any incentives in EPA’s analysis that would support conversion of undisturbed pastureland.

Even looking at the modeling results, increased canola production would not have “significant” land use impacts. Using updated data, FASOM estimated that most of the increase in canola oil production would be from imports and did not estimate that there would be a significant need to backfill the domestic U.S. vegetable oil market. 87 Fed. Reg. at 22,830. FASOM found only about 17,600 acres of expanded canola crop production in the United States, although total domestic harvested crop area was modeled to increase by approximately 60,600 acres. *Id.* at 22,830-22,831. Total “existing agricultural land” under the RFS in the United States was 379.8 million acres in 2019 (below the 402-million-acre 2007 baseline). 85 Fed. Reg. 7016, 7054 (Feb. 6, 2020). The modeled increase in crop production under EPA’s shock scenario would involve 0.016 percent of existing agricultural land, most of which is anticipated to come from Conservation Reserve Program lands. As such, we anticipate that the food market would remain the primary market driving consideration for canola plantings. We also believe that allowing renewable diesel production from canola oil to generate RINs under the RFS program could give farmers greater certainty and security that would help support increased production for both canola and wheat, the more likely rotational crop, for all uses. While this may have implications for other markets, we do not believe that such market changes would be driven by the RFS.

*b. EPA’s updates to the data used in the modeling are generally appropriate.*

EPA requests comments on the updates to the data it uses in this analysis compared to prior analysis. The updated data and assumptions include:

- Updated GREET hydrotreating, feedstock and fuel transport data, which will be updated to the 2021 GREET update;
- Updated 100-year GWP factors from IPCC Fifth Assessment Report;
- Updated FASOM and FAPRI input assumptions to include more recent USDA historical data on global canola oil production, yields and trade;
- Updated data for farming energy use; and
- Updated data on canola crushing.

As noted above and explained in its petition, USCA supports use of updated data regarding more recent data on global canola oil production, yields and trade, farming energy use, and canola crushing. As we explained in the petition, canola yields have been higher than was estimated in 2010 (and the industry continues to look to improve those yields), the 2010 analysis used overstated farm energy use, and USCA provided updated canola crushing data based on Canadian crushing operations, which we believe can represent crushing operations throughout North America. Indeed, EPA notes that data from the United Nations International Civil Aviation Organization for canola crushing in Canada, Europe and the U.S. reports lower energy use per pound of canola oil extracted, making the USCA data “somewhat conservative.” 87 Fed. Reg. at 22,835. In addition, real world data showed a different picture for canola seed and oil trade than what was modeled in 2010. EPA’s updated analysis better reflects what has actually occurred, although is still likely conservative.<sup>22</sup>

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<sup>22</sup> EPA continues to use satellite data to estimate land types and land use change patterns in other countries. While EPA is not reopening its methodology and we do not dispute EPA’s use of satellite data here, we note that, as recognized by several presenters at EPA’s recent workshop on GHG modeling, satellite data can have significant uncertainty and has not been shown to be very accurate in classifying land areas. Thus, use of satellite data, we believe, adds to the conservative nature of EPA’s estimates.



In light of the increasing production of renewable diesel in the United States and the number of facilities under construction or in development, we believe EPA's consideration of various data sources of renewable diesel production provides sufficient information to assess the lifecycle GHG emissions here for general pathways. EPA indicates that it will update its estimates to reflect the GREET-2021 updates for the final rule, but that such update should not impact its findings that the 50 percent threshold is met.

We also note that EPA is using a "conservative choice" to consider hydrogen produced from natural gas through a steam methane reforming process at central plants to estimate emissions from hydrogen, which is a major energy input to the hydrotreating process. 87 Fed. Reg. at 22,838. There has been increasing investment in hydrogen production plants from renewable energy, such as solar and wind, and from renewable feedstocks, such as renewable natural gas, as well as research into the use of carbon capture and sequestration. While we do not dispute EPA's choice, we agree that it is a conservative one, and that EPA's analysis should apply to a broad range of renewable diesel plant configurations using the hydrotreating process.

Finally, we do not oppose the use of GWPs from the IPCC Fifth Assessment Report, as long as EPA applies the GWPs consistently throughout the analysis, including with respect to the petroleum baseline.

- c. *USCA does not oppose EPA's use of an energy allocation method instead of a displacement approach for naphtha and LPG, but believes such an approach is conservative and may not be appropriate in all cases.*

EPA requests comment on use of energy allocation method instead of displacement approach for co-products naphtha and LPG. To our knowledge, for all other renewable diesel pathways, EPA has used a displacement approach to address the co-products made from the hydrotreating process. Here, however, EPA uses an energy allocation for all the co-products, except propane. EPA does so for various reasons, noting that it provides "a reasonably conservative estimate." 87 Fed. Reg. at 22,837-22,838. Again, we agree with EPA that basing allocation on energy rather than using displacement can lead to more conservative estimates. While we believe using displacement is typically more appropriate to use, we do not dispute EPA's use of an energy allocation here for the reasons EPA provides, including the fact that our petition asks for all the co-products to be eligible to generate RINs (except propane).

- d. *EPA properly includes pathways for co-processing.*

As EPA has done with other pathways, EPA has proposed to include canola oil as an eligible feedstock for co-processed renewable diesel, largely because the large majority of EPA's GHG reduction estimates significantly exceed the 50 percent reduction threshold for biofuels produced from canola oil hydrotreated without co-processing. Although EPA acknowledges that there is little data from co-processing facilities, EPA does not provide any reason to treat canola oil differently than similar feedstocks that are also approved for co-processing. As such, we support EPA's proposal to make these co-processed fuels eligible for advanced biofuel (D-code 5) RIN generation.

- C. The Weight of the Evidence Supports a Determination that Canola Oil Renewable Diesel Meets the 50% Lifecycle GHG Emissions Reduction Requirement for Advanced Biofuels and Biomass-based Diesel under the RFS program.

It cannot be disputed that lifecycle analysis is evolving and that there is substantial uncertainty in the economic models and satellite data used by EPA to estimate emissions reductions. Nonetheless, Congress gave EPA the discretion to determine if the GHG reduction thresholds are met. As such, we agree that EPA properly uses a “weight of evidence” approach to making that determination. 87 Fed. Reg. at 22,840. Although EPA’s analysis shows reductions as high as 80 percent, EPA has used a 95-percent confidence interval and the mean values for estimating international land use change. All of EPA’s estimates, except for the high case scenario for jet fuel, were well above the 50 percent requirement. Even the high case scenario for jet fuel was at least 46 percent.<sup>23</sup> There is more than enough support for EPA’s proposed determinations that canola oil renewable diesel, jet fuel, heating oil, naphtha and LPG would meet the 50 percent reduction requirement for advanced biofuels and biomass-based diesel under the RFS program.

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EPA has been considering, and the canola industry has been requesting, a renewable diesel pathway for canola oil since 2010. With the substantial investments being made in renewable diesel, ensuring a diversity of feedstocks will support these investments. A diversity of feedstocks will also reduce price volatility and allow for efficient use of feedstocks that is more consistent with the market for similar products, which ultimately would reduce compliance costs or minimize fluctuations in costs. The ability of canola oil to be a cost-effective feedstock to produce renewable diesel is enhanced by local incentives such as nearby low carbon fuel standards and clean fuels programs.

As outlined with the petition, EPA should prioritize these pathways consistent with EPA’s criteria for prioritization. Canola is produced sustainably, and additional production occurs through intensification, not clearing new lands. Because it is an ideal candidate feedstock for co-processing, it also can help pave the way toward increased use of cellulosic feedstocks at refineries. Most significant, canola oil renewable diesel is a commercially viable advanced biofuel that is available today and meets all the goals of Congress in establishing the RFS. For these reasons, we urge EPA to finalize the proposed pathways for canola oil renewable diesel, heating oil, jet fuel, naphtha, and LPG as soon as possible.

We look forward to working with EPA on this important matter. Please direct any questions to Tom Hance at (202) 969-8113 or [thance@gordley.com](mailto:thance@gordley.com). We appreciate all the work of EPA’s staff on USCA’s petition and thank you in advance for your consideration of these comments.

Best Regards,

Andrew Moore  
President  
U.S. Canola Association

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<sup>23</sup> Although EPA need not use it here, Congress did give it the authority to adjust the reduction requirements in certain circumstances. 42 U.S.C. §7545(o)(4). For the 50 percent reduction requirement, EPA may not adjust it below 40 percent. *Id.* §7545(o)(4)(B). The lowest reduction under EPA’s high scenario was 46 percent.

Appendix A  
Endangered Species Act:  
Canola Oil Renewable Diesel Pathways

The Endangered Species Act (ESA) requires a federal agency to “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any [listed] species or result in the destruction or adverse modification” of designated critical habitat by adhering to the consultation process. 16 U.S.C. §1536(a)(2). “Generally, unless an agency determines that an action will not affect these species and habitat, the agency must consult with the U.S. Fish and Wildlife Service [(USFWS)] and the National Marine Fisheries Service [(NMFS)] (the ‘Services’).” *Am. Fuel & Petrochemical Mfrs. v. EPA*, 937 F.3d 559, 591 (D.C. Cir. 2019). As EPA found when it designated biofuels derived from distillers grain sorghum oil as “advanced biofuel” under the Renewable Fuel Standard (RFS), the ESA requirements do not apply to EPA’s designation of renewable diesel produced from canola oil to generate Renewable Identification Numbers (RINs) as “advanced biofuel.” *See* 83 Fed. Reg. 37,735, 37,739 (Aug. 2, 2018); *see also* EPA-HQ-OAR-2017-0655-0091 at 8-15. In any event, such designation would cause “no effects” on listed species or critical habitat.

1. The ESA Consultation Provisions Do Not Apply to Designation of Renewable Diesel Fuels Derived from Canola Oil as “Advanced Biofuel.”

A. EPA does not have discretion to exclude canola oil derived biofuels from being eligible to meet the RFS volume requirements.

Under the RFS, Congress set statutory volume requirements for renewable fuel volumes, which are to include a specified amount of “advanced biofuels.” “Renewable fuel” is defined as fuel that “is produced from renewable biomass” and used to replace or reduce the quantity of fossil fuel present in a transportation fuel. 42 U.S.C. §7545(o)(1)(J). Renewable diesel is a fuel that is used to replace or reduce the quantity of petroleum-based diesel fuel.<sup>1</sup> Indeed, Congress established that advanced biofuel includes “biomass-based diesel,” such as renewable diesel. *Id.* §7545(o)(1)(B)(ii)(IV); 42 U.S.C. §13220(f) (defining “biodiesel” as “a diesel fuel substitute produced from nonpetroleum renewable resources that meets the registration requirements for fuels and fuel additives established by the Environmental Protection Agency under section 7545 of this title”). Renewable diesel that is co-processed may also be an “advanced biofuel,” but would not be “biomass-based diesel.” 42 U.S.C. §7545(o)(1)(D). EPA long ago determined that “renewable diesel” is “renewable fuel” and can be an “advanced biofuel” eligible to generate RINs to meet the volume requirements under the RFS program.

Where there is no question that renewable diesel is a “renewable fuel,” EPA has no discretion to exclude feedstocks from the RFS program to produce renewable diesel that meet the definition of “renewable biomass.” “Renewable biomass” includes feedstocks derived from “planted crops” from agricultural lands that were in existence on December 19, 2007. 42 U.S.C.

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<sup>1</sup> For ease of reference, we refer to “renewable diesel” to include renewable diesel used to replace diesel fuel in transportation vehicles, jet fuel, and heating oil, as well as co-products of renewable diesel production (*i.e.*, naphtha and liquified petroleum gas). These fuels, derived from canola oil, would also replace or reduce the quantity of petroleum-based fuels.

§7545(o)(1)(I)(i). In establishing an advanced biofuel pathway for biodiesel derived from canola oil, EPA essentially acknowledged that canola oil meets the “renewable biomass” definition. 75 Fed. Reg. 59,622 (Sept. 28, 2010). EPA also has already deemed all crops from Canada and the United States, which are expected to be the main sources of canola oil feedstock, as complying with the statute’s “renewable biomass” definition. 40 C.F.R. §80.1426(a)(1)(ii)(A).

- B. EPA does not have discretion to consider impacts on endangered species or critical habitat in designating a fuel as “advanced biofuel.”

The only question being determined by EPA, here, is whether canola oil renewable diesel meets the lifecycle greenhouse gas emissions reductions to be designated as a “renewable fuel” or as an “advanced biofuel.” Advanced biofuels are defined as “renewable fuel, other than ethanol derived from corn starch, that has lifecycle greenhouse gas emissions, as determined by the Administrator, after notice and opportunity for comment, that are at least 50 percent less than baseline lifecycle greenhouse gas emissions.”<sup>2</sup> 42 U.S.C. §7545(o)(1)(B)(i). The statute defines “lifecycle greenhouse gas emissions.” *Id.* §7545(o)(1)(H). While Congress gave EPA the authority to make the determination as to the lifecycle greenhouse gas emissions reductions, this definition allows EPA to only consider greenhouse gas emissions associated with the fuel’s full lifecycle, including all stages of fuel and feedstock production, not impacts to endangered species or their habitat.

In a case involving the RFS, the D.C. Circuit recently acknowledged that “EPA’s duty to consult with the Services ‘covers only discretionary agency actions and does not attach to actions ... that an agency is required by statute to undertake.’” *Am. Fuel & Petrochemical Mfrs*, 937 F.3d at 597 (quoting *Nat’l Ass’n of Home Builders v. Defenders of Wildlife*, 551 U.S. 644, 669 (2007)). The U.S. Supreme Court found that, where Congress identified the criteria an agency must use to take action, the ESA cannot “replace it with a new, expanded list that includes §7(a)(2)’s no-jeopardy requirement.” *Nat’l Ass’n of Home Builders*, 551 U.S. at 662; *see also WildEarth Guardians v. U.S. Army Corps of Eng’rs*, 947 F.3d 635, 640 (10th Cir. 2020) (finding ESA consultation did apply where “the Corps is similarly tasked with operating the reservoirs for flood and sediment control in a specific manner provided by the Flood Control Acts”); *Nat’l Wildlife Fed’n v. Sec’y of the U.S. Dep’t of Transp.*, 960 F.3d 872, 877 (6th Cir. 2020) (recognizing criteria that requires agency “to use some expertise and judgment” in approving response plan did not trigger ESA consultation requirement); *Alaska Wilderness League v. Jewell*, 788 F.3d 1212, 1224 (9th Cir. 2015) (“ESA cannot defeat an agency’s nondiscretionary statutory directive.”) (citation omitted); *Am. Forest Res. Council v. Hammond*, 422 F. Supp. 3d 184, 191 (D.D.C. 2019) (finding ESA could not override statutory timber sales requirements). As EPA has previously recognized, the statute defines the fuels that are eligible to be used to meet the RFS volume requirements. In so doing, Congress outlined those factors that EPA must consider. “These factors represent the full range of considerations that EPA is authorized to consider in determining whether a fuel qualifies as advanced biofuel; it follows that EPA is not authorized to consider impacts to threatened or endangered species in determining what fuels qualify as advanced biofuels under the Act.” EPA-HQ-OAR-2017-0655-0091 at 10. Although

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<sup>2</sup> Where EPA has found that canola oil biodiesel exceeded this 50 percent threshold, canola oil renewable diesel easily meets the 20 percent reduction required for facilities constructed after December 19, 2007. 42 U.S.C. §7545(o)(2)(A)(i).

EPA may undergo a rulemaking process to update the table of approved pathways, EPA's action here is to determine the level of the fuel's lifecycle GHG emissions reductions compared to the baseline fuel based on the considerations outlined by Congress.<sup>3</sup>

- C. Designation of canola oil renewable diesel fuels as "advanced biofuels" does not "cause" any actions to impact endangered species or their habitat.

Although previously finding that ESA does not apply to designation of fuel pathways, EPA nonetheless has determined that rules identifying pathways for the production of qualifying advanced biofuel and biomass-based diesel also will have "no effect on threatened or endangered species or the critical habitat of such species." EPA-HQ-OAR-2017-0655-0091 at 11. The same is true here.

The D.C. Circuit has found that consultation under the ESA is not required to the extent the agency determines that the action will not have an effect on listed species or critical habitat. In 2019, the ESA regulations were revised to define "effects of the action" as "all consequences to listed species or critical habitat that are *caused by* the proposed action, including the consequences of other activities that are caused by the proposed action."<sup>4</sup> 50 C.F.R. §402.2 (emphasis added). "A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action." *Id.* Mere designation of a fuel as "advanced biofuel" does not "cause" any action that might affect listed species or critical habitat. The action here would simply allow canola oil to be eligible for use as an alternative feedstock for renewable diesel production that will occur irrespective of EPA's action here.<sup>5</sup> The purpose of the approval is to put canola oil on the same playing field as other, similar feedstocks, such as soybean oil, that can generate an "advanced biofuel" RIN, allowing the market to work.

The designation of pathways in EPA's RFS regulations does not impose any requirements on any party. As EPA found with respect to distillers sorghum oil and corn oil, "there are no 'direct effects' ...[and]...[t]here are no such indirect effects" associated with establishing pathways under the RFS program. EPA-HQ-OAR-2017-0655-0091 at 11. EPA's action here does not require canola oil be used as a feedstock. Production of canola and use of canola oil depend on future decisions by independent third parties based on a variety of factors. Indeed, canola is already being grown and increased canola production can occur irrespective of EPA's approval here. While canola oil provides a commercially viable alternative feedstock, whether, when, where and how this production occurs depends on a range of issues that introduces too much uncertainty and speculation to identify any specific "effects" that might occur as a result of EPA's approval of an RFS pathway.

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<sup>3</sup> ESA regulations defined "Action" to include "the promulgation of regulations." 50 C.F.R. §402.02.

<sup>4</sup> The Biden Administration has indicated it is reconsidering the 2019 revisions to the ESA consultation regulations. Under the prior regulations, agencies could not rely on "the effects of uncertain and speculative actions that are not 'reasonably certain to occur.'" *Nat'l Wildlife Fed'n v. NMFS*, 839 F. Supp. 2d 1117, 1125 (D. Or. 2011) (citations omitted).

<sup>5</sup> Renewable diesel facilities are already being built or expanded due to the shift toward decarbonization, particularly in response to state Low Carbon Fuel Standards, and away from petroleum fuels. The construction of these facilities and renewable diesel production would occur regardless of the approval here.

2. EPA’s Action Here Will Not Change the Environmental “Baseline” and, As Such, Would Have “No Effects” on Listed Species or Critical Habitat.

The purpose of the environmental baseline is to describe, for the action area of the consultation, the condition of the portion of the listed species and critical habitat that will be exposed to the effects of the action. Renewable diesel is already under production. New and expanded production facilities have been announced without regard to the availability of canola oil as an alternative feedstock for these facilities to generate RINs under the RFS program.

EPA’s approval of the canola oil renewable diesel pathways would not change the incentives to produce renewable diesel. The investment into renewable diesel production in the United States has been the result of state low carbon fuel standards.<sup>6</sup> As shown in the table below, demand for renewable diesel from these state programs (and Canada) exceeds U.S. renewable diesel production.

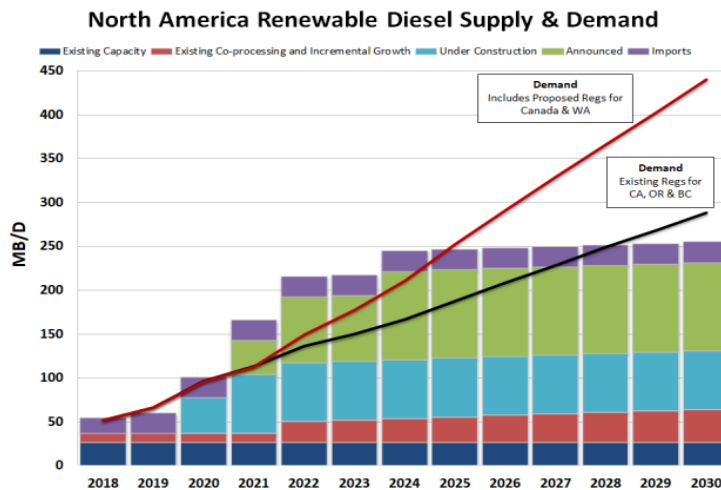


Figure 4. North American Renewable Diesel Supply and Demand. Source: Baker & O’Brien

Source: Baker & O’Brien, *Green Grow the (Refineries) – Low-Carbon Programs Spur More Renewable Diesel*, July 6, 2020, at 5.

The construction of these facilities is likely to occur regardless of EPA’s approval of canola oil as an alternative feedstock to generate RINs under the RFS program. Rather, the approval will provide an alternative feedstock for these facilities to consider, along with a myriad of market factors. It should also be noted that renewable diesel facilities are likely to be subject to local, state or federal permitting, which would more accurately determine any impacts and mitigation that may be required to avoid impacts on endangered species from these facilities.

Similarly, EPA’s approval here would not require canola oil be used for renewable diesel fuel production. EPA’s actions would simply open another market for canola oil by allowing

<sup>6</sup> See, e.g., U.S. Department of Energy Alternative Fuels Data Center, *Renewable Hydrocarbon Biofuels*, [https://afdc.energy.gov/fuels/emerging\\_hydrocarbon.html#:~:text=Nearly%20all%20domestically%20produced%20and%20imported%20renewable%20diesel.cycle%20carbon%20dioxide%20emissions%20compared%20to%20conventional%20fuels](https://afdc.energy.gov/fuels/emerging_hydrocarbon.html#:~:text=Nearly%20all%20domestically%20produced%20and%20imported%20renewable%20diesel.cycle%20carbon%20dioxide%20emissions%20compared%20to%20conventional%20fuels) (last visited May 17, 2022) (“Nearly all domestically produced and imported renewable diesel is used in California due to economic benefits under the Low Carbon Fuel Standard.”).

renewable diesel fuel producers to use canola oil as a feedstock based on appropriate market conditions. EPA has consistently noted that corn and soybean oil represents the largest feedstocks used for biofuel production under the RFS program, focusing their environmental review on those feedstocks. Based on EPA RIN generation data for 2011-2020, canola oil biodiesel currently represents less than 2% (average) of total ethanol-equivalent gallons (or RINs) generated under the RFS program.<sup>7</sup>

It is important to note that over 65% of canola oil used in the United States is imported.<sup>8</sup> The bulk of canola oil for biofuel production under the RFS is likely to come from canola grown in Canada. However, the ESA does not extend to activities occurring in foreign countries. *See generally* USFWS, *Foreign Species and the Endangered Species Act: Frequently Asked Questions*, <https://fws.gov/node/265726> (last visited May 17, 2022). “Thus, agencies need not consult [the Services] regarding extraterritorial critical habitat and also need not consult [the Services] regarding extraterritorial endangered species.” *Consejo De Desarrollo Economico De Mexico. v. U.S.*, 438 F. Supp. 2d 1207, 1245 (D. Nev. 2006) (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 578-88 (1992) (Stevens, J., concurring)).

Canola also is grown and processed in the United States. Canola/rapeseed planted crop acreage for the 2021 crop year in the United States was approximately 2.3 million acres out of over 659 million total planted acres (0.33%).<sup>9</sup> Almost 80% of canola oil in the United States is used for edible oil production, not biofuels.<sup>10</sup> Numerous factors are likely to determine whether the canola oil produced will be sold into the biofuels market.

Even if it is reasonable to assume that some additional canola production would occur as a result of EPA’s approval, there is no indication that the environmental baseline would change as a result. The statute restricts renewable biomass to planted crops from lands cleared or cultivated on December 19, 2007. 42 U.S.C. §7545(o)(1)(I)(i). Any canola production for use in biofuel production would need to be grown on existing agricultural lands. Through improved yields, increased production of canola in the United States has occurred with less acreage planted, as shown in the data from the U.S. Canola Association provided below.<sup>11</sup> Additional production of canola in the United States is possible without any land impacts. Additional canola can use existing infrastructure.<sup>12</sup>

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<sup>7</sup> Based on quarterly data, canola biodiesel represented 0.4% of total volume of biofuels reported by the California Air Resources Board under the Low Carbon Fuel Standard program (available at <https://ww3.arb.ca.gov/fuels/lcfs/lrtqsummaries.htm>).

<sup>8</sup> USDA Economic Research Service, Canola seed, oil and meal: Acreage planted, harvested, yield, supply, disappearance, and value, U.S., 1991/92-2021/22, Table 26 (Release date Mar. 25, 2022), <https://www.ers.usda.gov/data-products/oil-crops-yearbook/oil-crops-yearbook/>.

<sup>9</sup> This is based on USDA Farm Service Agency Crop Acreage Data (as of January 3, 2022), <https://www.fsa.usda.gov/news-room/efoia/electronic-reading-room/frequently-requested-information/crop-acreage-data/index>.

<sup>10</sup> USDA Economic Research Service, Canola seed, oil and meal: Acreage planted, harvested, yield, supply, disappearance, and value, U.S., 1991/92-2021/22, Table 26 (Release date Mar. 25, 2022), <https://www.ers.usda.gov/data-products/oil-crops-yearbook/oil-crops-yearbook/>.

<sup>11</sup> Available at <https://www.uscanola.com/crop-production/promote-canola-acres/>.

<sup>12</sup> Canola/canola oil is typically transported via rail or truck.

**Canola Area Planted and Harvested, Yield, and Production – States and United States: 2018-2020**

State	Area planted			Area harvested		
	2018	2019	2020	2018	2019	2020
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Idaho <sup>1</sup> .....	43.0	(NA)	(NA)	42.0	(NA)	(NA)
Kansas .....	47.0	29.0	5.0	35.0	19.0	3.0
Minnesota .....	46.0	51.0	50.0	45.0	48.5	48.0
Montana .....	120.0	150.0	155.0	116.0	138.0	149.0
North Dakota .....	1,590.0	1,700.0	1,510.0	1,580.0	1,610.0	1,490.0
Oklahoma .....	70.0	35.0	12.0	53.0	21.0	8.0
Oregon <sup>1</sup> .....	4.7	(NA)	(NA)	4.5	(NA)	(NA)
Washington .....	70.0	75.0	93.0	67.0	73.0	91.0
United States .....	1,990.7	2,040.0	1,825.0	1,942.5	1,909.5	1,789.0
State	Yield per acre			Production		
	2018	2019	2020	2018	2019	2020
	(pounds)	(pounds)	(pounds)	(1,000 pounds)	(1,000 pounds)	(1,000 pounds)
Idaho <sup>1</sup> .....	2,100	(NA)	(NA)	88,200	(NA)	(NA)
Kansas .....	960	1,090	1,790	33,600	20,710	5,370
Minnesota .....	2,060	2,270	1,570	92,700	110,095	75,360
Montana .....	1,120	1,450	1,620	129,920	200,100	241,380
North Dakota .....	1,960	1,800	1,960	3,096,800	2,898,000	2,920,400
Oklahoma .....	880	1,410	1,530	46,640	29,610	12,240
Oregon <sup>1</sup> .....	1,700	(NA)	(NA)	7,650	(NA)	(NA)
Washington .....	1,790	1,950	2,200	119,930	142,350	200,200
United States .....	1,861	1,781	1,931	3,615,440	3,400,865	3,454,950

(NA) Not available.

<sup>1</sup> Estimates discontinued in 2019.

While the U.S. canola industry is working to increase acreage, such production stems from canola’s use as a cover crop or rotational crop. Substantial research has been conducted in the best way to utilize canola with a cover crop or as a rotational crop. This research has shown that canola production can provide numerous benefits that would improve the environmental baseline overall, which are summarized below.

- Canola production increasingly uses conservation tillage practices.
- Brassica crops, like canola, are known to release chemical compounds that may be toxic to soil-borne fungal diseases of plants upon decaying, which can lead to a healthier root system for subsequent grain crops and increased nitrogen use efficiency.<sup>13</sup>
- Canola’s deep taproot helps to reduce soil compaction and make it easier to plant double crop soybeans.<sup>14</sup>
- When grown in rotation with wheat, benefits include weed and disease suppression and enhanced yield of wheat following canola.<sup>15</sup>

Because production is based on decisions by third parties and based on several factors, it is mere speculation to try to identify specific impacts on endangered species from EPA’s approval here.

<sup>13</sup> Kay Ledbetter, *Canola offers benefits for wheat producers when included in rotation*, AgriLife Today, June 19, 2014, <https://agriflifelife.tamu.edu/2014/06/19/canola-offers-benefits-for-wheat-producers-when-included-in-rotation/>.

<sup>14</sup> See, e.g., University of Missouri Extension, *Growing Canola for Oilseed or Cover Crop Use*, at 1 (2018), <https://extension.missouri.edu/publications/g4162>.

<sup>15</sup> See, e.g., Oklahoma State University Department of Plant and Soil Sciences, *Winter Canola Extension*, canola.okstate.edu (last visited May 17, 2022); Kansas State Research and Extension, *Great Plains Canola Production Handbook*, at 1-2 (2018), available at <https://bookstore.ksre.ksu.edu/pubs/MF2734.pdf>; Jennifer M. Latzke, *Canola still has place in Plains crop rotations*, High Plains Journal, Feb. 27, 2018, [https://www.hpj.com/crops/canola-still-has-place-in-plains-crop-rotations/article\\_2f2e0ab9-739c-5cd5-85e9-65f4d2f24f36.html](https://www.hpj.com/crops/canola-still-has-place-in-plains-crop-rotations/article_2f2e0ab9-739c-5cd5-85e9-65f4d2f24f36.html).