# Swarming the Aisles II

Rating top retailers on pesticide reduction and organic food to protect pollinators





#### Acknowledgements

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#### About Friends of the Earth:



Friends of the Earth United States, founded by David Brower in 1969, is the U.S. voice of the world's largest federation of grassroots environmental groups, with a presence in 75 countries. Friends of the Earth works to defend the environment and champion a more healthy and just world. We have provided crucial leadership in campaigns resulting in landmark environmental laws, precedent-setting legal victories and groundbreaking reforms of domestic and international regulatory, corporate and financial institution policies. Visit www.foe. org to learn more.

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# CONTENTS

Executive Summary	
Introduction: Putting agricultural pesticide reduction on the sustainability agenda	8
How Companies Shape Up	11
The Industry	14
Consumer Trends	19
State of the Science	21
Industry Leadership	
Recommendations and Opportunities for Success	
Conclusion	
Appendix I: Scorecard Methodology	41
Appendix II: Scoring Rubic	41
Appendix III: Survey	
Appendix IV: Pesticides of Concern	
Appendix V: Sustainability Initiatives by Retailer	

# EXECUTIVE SUMMARY



## Putting pesticide reduction on the sustainability agenda

Food retailers face both reputational and supply chain risks for failing to address the overuse of agricultural pesticides. A growing body of evidence demonstrates that pesticides are harming human health, soil health, water quality, and biodiversity — including pollinators and other organisms critical to the long-term sustainability of our food system.

Pesticides are key drivers in the decline of invertebrate pollinating species, 40 percent of which are on the <u>brink of</u> <u>extinction</u> according to UN meta-analysis. Pollinators are the "canaries in the corn fields" — the decimation of bee and butterfly populations associated with the rampant use of toxic pesticides warns us that something is fundamentally out of kilter with our farming systems. It indicates that we must dramatically reduce use of toxic pesticides in agriculture and shift to organic and other ecological approaches to farming that nourish people and the ecosystems on which we depend.

A growing body of data connects human pesticide exposure with a host of health problems from cancers and Parkinson's to neurodevelopmental and reproductive disorders. Pesticide residues on food have increased since 2010, according to new <u>data</u> released by the U.S. Food and Drug Administration. Approximately 82 percent of domestically grown fruits and 62 percent of vegetables carry residues of weed killers, insecticides and other pesticides.

Organic farming is the gold standard for reducing use of pesticides in agriculture. And recent studies show that most non-organic farmers could <u>dramatically reduce</u> overall pesticide use while maintaining productivity and profitability, and in some cases, could improve yields and decrease farm costs.

Yet pesticide reduction — to protect pollinators, people and the environment — lags far behind other sustainability and social responsibility efforts in the retail sector. Our analysis shows that only one out of 25 leading food retailers in the United States has adopted a food-related pesticide policy: Whole Foods. (Figure 1)

## Food retailers will feel the sting of pollinator declines

Bees and other pollinators are responsible for one in three bites of food we eat, and 75 percent of food crops overall. Without them, we would face shortages of some of our most important and nutritious foods, including nuts, fresh fruit and vegetables, meat and dairy, processed foods, juices and more. There are clear steps retailers can and must take to address food production threats associated with overuse of pesticides, satisfy consumer demand for healthy and environmentally conscious food, and ensure a sustainable food supply into the future.

#### Figure1: Sustainability policies adopted by leading food retailers





of categories, see Appendix V.

#### Growing U.S. organic

American farmers cannot keep up with the rising demand for organic food, and the gap between U.S. demand and production is increasingly being filled by imports. Retailers have an important role to play in expanding organic agriculture in the U.S. by supporting farmers during transition, prioritizing products from domestic organic farmers, and pushing for public policies to advance the American organic sector. This would be a win-win-win: Organic agriculture provides greater economic well-being for farmers and rural communities, pollinators and people are protected from toxic pesticides, and food retailers will be guaranteed a reliable supply of high-quality organic products. In addition, a wealth of data shows that organic farming systems are a climate solution: They conserve water, reduce greenhouse gas emissions associated with agriculture, sequester carbon in the soil, and increase resilience in the face of drought and floods.

#### Meeting consumer demand

In the hypercompetitive food retail market, strong policies to expand organic offerings and phase out toxic pesticides are critical ways for retailers to distinguish themselves from the pack. The top retail news over the past year confirms that organic is the future of food retail, from Amazon's acquisition of Whole Foods to German grocer ALDI's bid to open 900 new stores offering low-cost organic food in <u>2018</u>. Meanwhile, the industry's largest lobby group — the Grocery Manufacturers Association — is <u>splintering</u> as it fails to keep up with growing consumer demand for authentic and healthy food.

Demand for organic food is fueled by consumers' desire for transparency and their concern about toxic <u>pesticides</u>. On both of these fronts, the USDA organic label is the gold standard. Many of the companies profiled in this report are competing to meet consumer demand for organic, but only six have clearly stated their intent to expand organic offerings in the future: Albertsons, BJ's Wholesale Club, Costco, Target, Walgreens and Whole Foods. The trend toward organic is a bright spot in the food industry, but without a commitment to expand Americangrown organic and to reduce pesticide use in non-organic agriculture, our food system will continue to be soaked in toxic pesticides. Given that the vast majority of American agriculture is still non-organic, the largest impact for pesticide reduction is in conventional supply chains.

If retailers truly want to establish themselves as leaders on health and sustainability, they need to set clear goals to phase out toxic pesticides in their supply chains. Only Whole Foods has shown leadership on this front. While there were reports that ALDI planned to phase out eight pesticides in 2016, the company never confirmed these reports or announced having taken action.

#### Spurring a race to the top

Friends of the Earth is working with food retailers to make agricultural pesticide reduction a top priority. For the second year in a row, we evaluated a set of food retailer practices and policies related to pesticides, pollinator health and organic offerings to create an industry scorecard that highlights leaders and laggards. This report details the results of our analysis, provides scientific background on the pesticide and pollinator crisis, highlights innovative company leadership along the supply chain, and offers guidance for retailer action.

Friends of the Earth, with the support of more than 50 other <u>organizations</u>, is working with retailers on the following goals. We also strongly encourage companies to advocate for public policies aimed at reducing agricultural pesticide use, protecting pollinators and supporting the expansion of organic agriculture in the U.S.

REDUCE PESTICIDES	GROW ORGANIC
Establish a pollinator protection policy that includes the phase out of neonicotinoids, glyphosate, chlorpyrifos and other pollinator toxic pesticides as well as implementation of alternative, least-toxic pest management strategies in the company's supply chain	Increase USDA certified organic food and beverages to 15 percent of overall offerings by 2025, prioritizing American farmers
INCREASE TRA	ANSPARENCY
	Publicly disclose company policies and progress related to these actions

These actions will create a more regenerative and resilient food system and will meet growing consumer demand for transparency, health and sustainability. With a focus on American farmers, these actions will bring the benefits of organic and ecological farming home to U.S. farms and communities.

For a full set of recommendations for retailers, institutions, cities, counties, states, the U.S. Environmental Protection Agency, Congress and consumers, see the full report.

#### How companies shape up

Our analysis shows that most of the top U.S. food retailers have a long way to go to address overuse of agricultural pesticides and to advance organic agriculture in the U.S. See the full report for details.

We found that:

- The food retail sector is failing to protect pollinators from pesticides: Twenty-four of 25 leading food retailers do not have a publicly available policy to reduce or eliminate pesticide use in their food supply chains. Only Whole Foods has adopted a food-related pesticide policy. Three big box chains that sell groceries as well as general merchandise have adopted pesticides policies for their home and garden products: BJ's Wholesale Club, Costco and Walmart. Twenty of 25 retailers received an "F" in this category.
- The food retail sector needs to set clear goals to meet skyrocketing consumer demand for organic food and beverages: Nineteen of 25 leading food retailers do not have a publicly available company metric or goal regarding commitment to increase overall certified organic offerings. Only Albertsons, BJ's Wholesale Club, Costco, Target, Walgreens and Whole Foods have a publicly available metric or goal.
- Food retailers need to take action to expand organic agriculture in the U.S.: Only four of 25 leading food retailers (Whole Foods, Target, Wegmans and Costco) have publicly stated that they are taking measures to expand U.S. production of organic food or support U.S. organic farmers.
- Consumers need greater transparency about organic offerings: Fifteen of 25 leading food retailers do not publicly disclose data on organic sales or their current percentage of organic offerings. Only Albertsons, Ahold Delhaize, ALDI, BJ's Wholesale Club, Costco, Kroger, Target, Trader Joe's, Wegmans and Whole Foods disclose organic data.
- Whole Foods to continue leadership despite Amazon acquisition: Amazon's acquisition of Whole Foods shows that organic is the future of food retail, but the company has a great deal to learn from its new subsidiary — Amazon received an "F" in all three

categories of our scorecard. What will the acquisition mean for Whole Foods' leadership on pesticide reduction? A Whole Foods representative disclosed to Friends of the Earth, "We continue our existing [pollinator and pesticides] programs and policies that were in place when we last completed the FOE survey. Still marching forward on pesticide and other sustainability issues."

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**Food Retailer** 

**Final Grade** 

7

## I. INTRODUCTION:

Putting agricultural pesticide reduction on the sustainability agenda



Food retailers face both reputational and supply chain risks for failing to address the overuse of agricultural pesticides. A growing body of evidence shows that pesticides are harming human health, soil health, water quality, and biodiversity — including pollinators and other organisms critical to the long-term sustainability of our food system. Pesticides have "catastrophic impacts on the environment, human health and society as a whole," according to a recent UN report that debunks the myth that pesticides are necessary to feed a growing world population.<sup>1</sup>

Pesticides are a key driver in the decline of invertebrate pollinating species, 40 percent of which are on the brink of extinction.<sup>2</sup> Pollinators are the "canaries in the corn fields;" the decimation of bee and butterfly populations associated with the rampant use of toxic pesticides warns us that something is fundamentally wrong with our farming systems. It indicates that we must dramatically reduce use of toxic pesticides in agriculture and shift to organic and other ecological approaches to farming that nourish people and the ecosystems on which we depend.

A growing body of data connects human pesticide exposure with a host of health problems, from cancers and Parkinson's to neurodevelopmental and reproductive disorders. Pesticide residues on food have increased since 2010, according to new data released by the U.S. Food and Drug Administration (FDA).<sup>3</sup> Samples of fruits and vegetables showed the highest frequency of pesticide residues — approximately 82 percent of domestically-grown fruits and 62 percent of vegetables carried residues of weed killers, insecticides and other pesticides.

Yet pesticide reduction — to protect pollinators, people and the environment — lags far behind other sustainability and social responsibility efforts in the retail sector. Our analysis shows that only one out of 25 leading food retailers has adopted a foodrelated pesticide policy: Whole Foods (Figure 1).

#### Figure1: Sustainability policies adopted by leading food retailers

Only 1 out of 25 leading food retailers have a policy

to reduce use of toxic pesticides in agriculture Energy & Climate Impact 21 Waste & Recycling 21 Seafood **Animal Welfare** 14 Palm Oil 10 **Agricultural Pesticides** 1 10 15 20 25 5

For a full list of sustainability priorities by retailer and descriptions of categories, see Appendix V.

6

Pesticides have catastrophic impacts on the environment, human health and society as a whole

-United Nations Human Rights Council

It is imperative that pesticide reduction and promotion of organic agriculture become more deeply embedded in the practices and policies of all leading food retailers. Not only will this meet increasing consumer demand for foods that embody health and sustainability, our capacity to continue feeding ourselves and generations to come depends on a food system that protects the water, soil, pollinators and climate we need to grow abundant food – and the farmers, farmworkers and communities that grow our food.

Friends of the Earth is working with food retailers to make agricultural pesticide reduction a top priority. For the second year in a row, we evaluated a set of food retailer practices and policies related to pesticides, pollinator health, and organic offerings to create an industry scorecard that highlights leaders and laggards. This report details the results of our analysis, provides scientific background on the pesticide and pollinator crisis, highlights innovative company leadership along the supply chain, and offers guidance for retailer action.

#### A. Food retailers will feel the sting of pollinator declines

Failing to protect pollinators puts retailers at risk in the public eye as well as in their supply chains. Bees and other pollinators are essential to the production of one out of every three bites of food we eat. Without pollinators, grocery stores would run short of some of our most important and nutritious foods, including nuts, fresh fruit and vegetables, meat and dairy, processed foods, juices and more.

In fact, 71 of the 100 crops that provide 90 percent of the world's food — from almonds to tomatoes to strawberries — are pollinated by bees.<sup>4</sup> Honeybees, in particular, contribute an estimated \$20 billion to the U.S. economy<sup>5</sup> and \$217 billion to the global economy.<sup>6</sup> Globally, between \$235 billion and \$577 billion worth of annual global food production relies on direct contributions by pollinators<sup>7</sup>.

The volume of agricultural production requiring pollination has increased by 300 percent during the past 50 years.<sup>8</sup> Pollinator-dependent agriculture contributes approximately \$29 billion to the U.S. economy and up to \$577 billion to the global economy annually.<sup>9</sup>

But pollinators are in great peril; their populations are declining around the world thanks, in large part, to massive overuse of agricultural pesticides.<sup>10</sup> The decade-long decline of honeybees is already having a financial impact. California

now requires honeybees to be transported across the country to pollinate its \$2.3 billion almond crop, requiring an estimated 1.5 million bee hives at a cost of about \$150 a hive.<sup>11</sup> In southwestern China, declining pollination has forced farmers to resort to costly and time-consuming hand pollination.<sup>12</sup>

Companies are facing pressure from investors to address threats to pollinators. Recognizing that pollinator declines pose a real financial risk, investors have called on corporations to adopt a shared framework to report bee-related progress and highlight areas of improvement.<sup>13</sup> A recent responsible investment analysis by Schroders called on companies throughout the investment universe to develop a response to halt and reverse the decline of pollinators before consequences become more significant.<sup>14</sup>

Shareholder actions are also emerging; PepsiCo shareholders petitioned the company to assess financial risks associated with pollinator declines.<sup>15</sup> And in June 2017 beekeepers, farmworkers and concerned citizens gathered outside Kroger's annual shareholder meeting to deliver 417,000 petition signatures urging the company to stop selling food grown with bee-killing pesticides and to carry more bee- and people-friendly organic food.<sup>16</sup>



## Market leadership is crucial to pesticide reduction: The case of chlorpyrifos

The state of the science demonstrating human and environmental harm from pesticides is often ahead of our federal laws and regulations. This gap between science and regulatory action makes leadership from the food retail sector all the more important.

The case of a pesticide called chlorpyrifos highlights this reality. The science is clear that chlorpyrifos is highly toxic to pollinators as well as people. Data show likely adverse affects on approximately 1,800 plants and animals, many of them critically endangered, including bees.<sup>17</sup> Data on human health demonstrate that in-utero and early-life exposures to chlorpyrifos can lower children's IQs and structurally change the parts of the brain that control language and memory.<sup>18</sup> Chlorpyrifos is so hazardous that the U.S. Environmental Protection Agency determined that there is no safe use of the pesticide in a 2016 risk assessment.<sup>19</sup> Yet, in 2017, the agency reversed course on a decision to ban this dangerous pesticide, despite robust and compelling scientific data. This is not an isolated case.

Whole Foods' Responsibly Grown© program is an excellent example of market leadership that follows the science on pesticides. As Whole Foods states, "Responsibly Grown© prohibits specific pesticides that have been identified by scientists as high risk but are commonly used in conventional agriculture today."<sup>20</sup> The program aims to "reduce pesticide use and its risks to consumers, farmworkers, wildlife and the environment." Chlorpyrifos is prohibited in all categories of Responsibly Grown© products, along with other commonly used hazardous pesticides like atrazine, 2,4-D and malathion.

#### Learning from garden retailers

Friends of the Earth worked successfully with Lowe's, Home Depot and more than 135 other garden retailers, including Costco and Whole Foods, to implement time-bound phase-outs of neonicotinoid pesticides for bee-attractive plants.<sup>21,22,23</sup> For example, Lowe's agreed to phase out neonicotinoids in plants and products, redouble pesticide management efforts and implement an application-reduction plan with plant suppliers. This includes the collection and sharing of growers' best practices around use of biological controls, integrated pest management practices and research into best alternatives. Nurseries are now required to disclose to Lowe's the amount of pesticides used per acre or a similar metric.

# II. HOW COMPANIES SHAPE UP



In our effort to spur interest in pesticide reduction and pollinator protection as a top sustainability initiative in the food retail industry, we conducted an extensive analysis of 25 of the largest food retailers in the U.S., as ranked by total U.S. sales.

#### A. Methodology

We used three primary criteria to assess pollinator protection: policies and practices to reduce pesticides, organic offerings and policies, and transparency. We focused on U.S. publicly available policies regarding U.S. operations. A full description of the methodology is in Appendix I, and the scoring rubric is in Appendix II.

We conducted a retailer survey (Appendix III) and reviewed publicly available information, including company websites, company annual reports, SEC filings, corporate social responsibility and sustainability reports, press coverage and industry analyses.

We also contacted each company to request relevant information. Nine of the retailers — Albertsons, Amazon, Costco, CVS, Hy-Vee, Trader Joe's, Walgreens, Wegmans and Whole Foods — responded to Friends of the Earth surveys, calls and letters and were willing to disclose in writing and via other communications all relevant information. Sixteen of the retailers were predominately unresponsive to our requests for information via surveys, calls and letters.

#### **B. Results**

Our analysis shows that most of the top food retailers have a long way to go to reduce pesticides and to protect pollinators. The vast majority have not adopted policies to eliminate or reduce pollinator-toxic pesticides in their company supply chains for conventional food and beverages. And while leading retailers are offering more organic food, few are prioritizing U.S. organic farmers or helping more U.S. growers transition to organic production. What's more, there is a lack of transparency around organic purchasing: More than half of the retailers surveyed do not publicly disclose company offerings or sales of organic food, and few have stated goals around increasing organic offerings.

We found that:

The food retail sector is failing to protect pollinators from pesticides: Twenty-four of 25 leading food retailers do not have a publicly available policy to reduce or eliminate pesticide use in their food supply chains. Only Whole Foods has adopted a food-related pesticide policy. Three big box chains that sell groceries as well as general merchandise now have pesticides policies for their home and garden products: BJ's Wholesale Club, Costco and Walmart. Twenty of 25 retailers received an "F" in this category.

- The food retail sector needs to set clear goals to meet skyrocketing consumer demand for organic food and beverages: Nineteen of 25 leading food retailers do not have a publicly available company metric or goal regarding commitment to increase overall certified organic offerings. Only Albertsons, BJ's Wholesale Club, Costco, Target, Walgreens and Whole Foods have a publicly available metric or goal.
- Food retailers need to take action to expand organic agriculture in the U.S.: Only four of 25 leading food retailers (Whole Foods, Target, Wegmans and Costco) have publicly stated that they are taking measures to expand U.S. production of organic food or support U.S. organic farmers.
- Consumers need greater transparency about organic offerings: Fifteen of 25 leading food retailers do not publicly disclose data on organic sales or their current percentage of organic offerings. Only Albertsons, Ahold Delhaize, ALDI, BJ's Wholesale Club, Costco, Kroger, Target, Trader Joe's, Wegmans and Whole Foods disclose organic data.
- Whole Foods to continue leadership despite Amazon acquisition: Amazon's acquisition of Whole Foods shows that organic is the future of food retail, but the company has a great deal to learn from its new subsidiary — Amazon received an "F" in all three categories of our scorecard. What will the acquisition mean for Whole Foods' leadership on pesticide reduction? A Whole Foods representative disclosed to Friends of the Earth, "We continue our existing [pollinator and pesticides] programs and policies that were in place when we last completed the FOE survey. Still marching forward on pesticide and other sustainability issues."

#### **Food Retailer Scorecard**

13

■ = A ■ = B = = C ■ = D ■ = F

Food Retail	er	Organic	Pesticides	Transparency	Final Grade
WHÔLE FOODS	Whole Foods	Α	В	A	А
COSTCO.	Costco	Α	C	Α	A-
Albertsons	Albertsons	A-	F	Α	В-
E	BJ's Wholesale Club	В	С	С	B-
	Target	Α	F	С	C+
TRADER JOE'S	Trader Joe's	В	F	В	C+
Walgreens.	Walgreens	В	F	В	C+
Wegmans	Wegman's	В	F	В	C+
∭≞ ALDI	ALDI U.S.	С	С	D	С
🖗 Ahold Delhaize	Ahold Delhaize	С	F	В	C
CVS	CVS	С	F	В	C
	Hy-Vee	С	F	В	С
Kroger	Kroger	В	F	С	С
Walmart >¦<	Walmart	С	С	D	С
Market Basket.	DeMoulas	С	F	С	C-
GIANT	Giant Eagle	С	F	C	C-
H-E-B	H-E-B Grocery	С	F	С	C-
meijer	Meijer	С	F	С	C-
Publix.	Publix	С	F	С	C-
	Rite Aid	С	F	D	D+
Smart&Final.	Smart & Final	С	F	D	D+
SUPERVALU.	Supervalu	С	F	D	D+
Wakefern	Wakefern	С	F	D	D+
WinCo FOODS	WinCo	С	F	D	D+
amazon	Amazon	F	F	F	F

# III. THE INDUSTRY



The food retail industry has significant power to shape agricultural practices in the U.S. and around the world. Food sales by the top retailers increased by 39.9 percent from 1993 to 2013, when retailers reported gross earnings of \$449.3 billion.<sup>24</sup> The 50 largest food retailers in the U.S. generate approximately 70 percent of the sector's revenue, demonstrating increasing concentration.<sup>25</sup>

Supermarket and grocery stores comprise the largest food retail market in the U.S.,<sup>26</sup> accounting for over \$668 billion in sales, more than 38,000 stores, with sales topping \$2 million, and employment of approximately 4.8 million people in

2016.<sup>27</sup> Globally, grocery stores and supermarkets sell more than \$4 trillion annually.<sup>28</sup>

However, of the top food retailers in the U.S., many are not traditional supermarkets. For example, Walmart and Target are discount "big box" retailers, and CVS and Walgreens are pharmacies. Food sales for these companies are larger than those of some conventional grocers.<sup>29</sup> The expansion of food sales from non-traditional operators stems from the growth of supercenters, warehouse club stores and discount retailers, including dollar stores and pharmacies, which have increased their food sales since the late 1990s.<sup>30</sup>

Figure 1: 25 of the largest U.S. food retailers by sales					
Retailer	2016 Revenue from Consumables (Billions)	Number of stores in the U.S.			
Walmart	\$255.9	5,716			
Kroger	\$112.6	3,666			
Costco	\$62.8	592			
Albertsons	\$60.4	2,340			
Ahold Delhaize	\$34.4	1,980			
Publix	\$33.3	1,137			
Target	\$32.1	1,803			
Walgreens	\$27.7	8,175			
H-E-B Grocery	\$23	384			
cvs	\$20.1	9,656			
Meijer	\$17.9	232			
SuperValu	\$16	197			
Wakefern Food Corp.	\$16	93			
Whole Foods*	\$15.6	447			
Trader Joe's	\$13.3	470			
ALDI US	\$12.8	1,630			
Hy-Vee	\$9.8	242			
BJ's Wholesale Club	\$9.6	214			
Giant Eagle	\$9.4	429			
Rite Aid	\$8.3	4,550			
Wegmans Food Markets Inc.	\$8.3	92			
Winco Foods LLC	\$6.7	113			
DeMoulas Supermarkets Inc.	\$4.8	78			
Smart & Final	\$4.4	306			
Amazon	\$1.6	N/A			

\*This report was prepared shortly after the Amazon acquisition of Whole Foods, therefore we report revenue and number of stores of each company separately

Note: Data acquired from Supermarket News Top 75 Retailers and Wholesalers Report<sup>31</sup>

	Figure 2: Retailer banners and subsidiaries				
Ahold Delhaize	bFresh	Giant Carlisle	Hannaford	• Peapod	
	Food Lion	Giant Landover	Martin's Food Market	Stop & Shop	
Albertsons	Acme	Jewel-Osco	Pavillions	Tom Thumb	
	Albertsons	Lucky	• Randall's	United Supermarkets	
	Amigos	<ul> <li>Market Street</li> </ul>	Safeway	• Vons	
	Carrs	Pak 'n Save	Shaw's Super Saver		
	• Haggen		Foods		
ALDI		·			
Amazon					
BJ's Wholesale					
Costco					
CVS					
Demoulas Market Basket					
Giant Eagle	<ul> <li>Giant Eagle</li> </ul>				
	Market District				
H-E-B					
Hy-Vee			050		
Kroger	Baker's Supermarkets	Harris leeter		• Scott's	
	City Market	Jay C Food Stores	Ralphs	• Smith's	
	<ul> <li>Dillons Food Store</li> </ul>	<ul> <li>King Soopers</li> </ul>	Pick 'n Save	<ul> <li>Fred Meyer</li> </ul>	
	<ul> <li>Fry's Food and Drug</li> </ul>	Kroger	Mariano's Fresh Market	<ul> <li>Foods Co.</li> </ul>	
	Gerbes Super Markets	Owen's	Metro Market	Ruler Foods	
		<ul> <li>Pay Less Super Markets</li> </ul>	Copps		
Meijer		•	•	•	
Publix					
Rite Aid					
Smart & Final	Smart & Final				
	Cash & Carry Smart For	odservice	•		
Supervalu, Inc.	<ul> <li>County Market</li> </ul>	Farm Fresh Food and	<ul> <li>Shop 'n Save</li> </ul>	<ul> <li>Rainbow Foods</li> </ul>	
	• Cub	Pharmacy	Shoppers Food and		
Townsh		Hornbacher's	Pharmacy		
Trader Jos's					
Wakefern Food Corn	Prico Dito				
Wakelein 1 000 Corp	ShonDito				
Walgreens	Shopkite				
Walmart					
Wegmans					
Whole Foods					
WinCo Foods					

16

#### A. Rise of online food retailing

The growth of online food retail is changing the way people shop for food. In 2016 online food retail accounted for \$20.5 billion in sales.<sup>32</sup> This number is expected to rise dramatically; it is estimated that online shoppers could spend as much as \$100 billion on food-at-home items in coming years.<sup>33</sup> Today, 23 percent of American households are buying food online.<sup>34</sup> If this upward trend continues, in 10 years, 60 percent of online shoppers are expected to spend over a quarter of their food dollars online.<sup>35</sup> This growth is partly driven by millennial shoppers.<sup>36</sup>

While more than half of online grocery shoppers are Amazon Prime members, increasing competition is coming from both traditional retailers and innovative start-ups.<sup>37</sup> For example, a same-day grocery delivery service called Instacart that homedelivers groceries from brick-and-mortar locations grew to a \$2 billion company between 2012 and 2015.<sup>38</sup> Another emerging leader, Thrive Market, has garnered hundreds of thousands of members since launching in 2014.<sup>39</sup> Increasing access to organic and healthy foods is a primary value for the company; it aims to provide organic and other healthy products to its members at wholesale prices, and for each paid membership, it sponsors a free membership for a lowincome family.<sup>40</sup>

Meanwhile, the largest brick-and-mortar retailers, Walmart and Kroger, are expanding their online offerings.<sup>41</sup> Walmart expects its e-commerce to grow by 40 percent in the next fiscal year, which will include the addition of 1,000 onlinegrocery pick-up locations.<sup>42</sup> Kroger has increased online offerings via acquisitions. In 2014, Kroger acquired Harris Teeter, which developed the online ordering platform Express Lane, and later Kroger purchased Vitacost, a nutrition and healthy-living e-commerce business.<sup>43</sup> While these brick-andmortar retailers are increasing their online grocery offerings, they are also working to improve the produce departments in their physical stores to entice customers to continue to shop in person.<sup>44</sup>

#### 1. What's the buzz about Amazon?

In a food retail takeover that shook the industry, Amazon acquired Whole Foods for \$13.7 billion in August 2017,<sup>45</sup> combining the leading national organic grocer with the top online retailer. The acquisition validates that organic is the future of food retail and has the potential to make organic food available to customers in all corners of the country. Soon after the acquisition, more than 1,000 Whole Foods items were added to Amazon.com.<sup>46</sup>

Lower costs at Whole Foods locations and broader availability of foods with Whole Foods' high standards via online retail should raise the bar for all food retailers. The competition was evident immediately: In the first week following Amazon's acquisition, Whole Foods' foot traffic from new shoppers jumped 33 percent with Walmart regulars accounting for the largest percentage of first-time customers, along with regular shoppers from Kroger and Costco, according to the research firm Thasos Group.<sup>47</sup> While retailers were already contending with growing consumer expectations that groceries should be delivered according to the Amazon model,<sup>48</sup> traditional brick-and-mortar stores will now be in direct competition with Amazon. As a result of the takeover, Amazon will have a physical presence in nearly 500 locations.



The Amazon-Whole Foods merger increased consolidation in an industry that is already heavily concentrated. Only 36.9 percent of U.S. grocers are independent, and this number continues to shrink because independent retailers cannot compete with mega-retailers like Amazon-Whole Foods.<sup>49</sup>

While some are optimistic about the increased availability of organic food for online customers, others have predicted an increase in food deserts due to a potential decrease in the number of physical grocery stores.<sup>50,</sup> The Congressional Black Caucus voiced concerns that the Amazon-Whole Foods merger could increase food deserts and health disparities for African American and poor communities,<sup>51</sup> particularly given that AmazonFresh grocery delivery service is "pay to play," with a base charge of \$14.99 per month.

The outcome of the merger on Whole Foods' progressive procurement policies is likely to be mixed.

Amazon's focus on centralization and efficiency is already weakening Whole Foods' branch managers' ability to purchase form local and regional producers.<sup>52</sup> And tighter margins and Amazon's terms of business may impede the ability of innovative independent brands to get their products on shelves.<sup>53</sup> Yet, there's an opportunity for Whole Foods' leadership on organics and pesticide reduction to gain even greater significance as their standard sets the bar for both brick-and-mortar and online retail. A Whole Foods representative disclosed to Friends of the Earth, "We continue our existing [pollinator and pesticides] programs and policies that were in place when we last completed the FOE survey.

18

Still marching forward on pesticide and other sustainability issues."  $^{\rm 54}$ 

Meanwhile, Amazon received an "F" in all three categories of analysis in our scorecard: pesticides and pollinator protection, organics and transparency. In the best-case scenario, Amazon will learn from its new subsidiary, incorporating more sustainable and transparent practices throughout its operation. In the worst-case, Amazon will curtail the leadership of Whole Foods that is so desperately needed to move the food retail sector toward a more sustainable future. Amazon should be clear that people shop at Whole Foods because they trust their values and high standards — weakening those standards would undermine customer confidence.

> "We continue our existing [pollinator and pesticides] programs and policies that were in place. [We are] still marching forward on pesticide and other sustainability issues."

#### -Whole Food Representitive

# IV. CONSUMER TRENDS



Across the country, consumer demand for organic food is skyrocketing, concern about pesticides is mounting, and the need to expand ecological farming systems is more pressing than ever. Today's consumers are increasingly demanding food that helps protect the health of their families, communities and the environment.<sup>55</sup>

Shifting consumer priorities are shaking up the landscape of the food industry. The top 20 U.S. food and beverage companies lost roughly \$18 billion in market share between 2011 and 2017 as shoppers turned to brands that promise authenticity and simple, whole ingredients, according to an analysis by Credit Suisse.<sup>56</sup> And amid disagreements about how to respond to changing consumer tastes, major companies like Nestlé and Campbell's Soup Co. have splintered from the Grocery Manufacturers Association, the most powerful lobbying group for the food industry.<sup>57</sup>

#### 1. Transparency & authenticity

Desire for greater transparency tops consumer trends, according to the 2017 U.S. Grocery Shopper Trends report.<sup>58</sup> Consumers feel they have a right to "know what I put in my body" and want an authentic relationship with their food retailer.

#### 2. Organic is booming

Organic remains the fastest-growing sector of the food industry with an 8.8 percent growth rate in 2016, well above the overall food market at 3.3 percent.<sup>59</sup> Since the 1990s, organic food sales in the U.S. have shown double-digit growth and have exceeded 10 percent growth even since the downturn in the American economy in 2008.<sup>60</sup> Americans spent approximately \$47 billion on organics in 2016.<sup>61</sup> Food retailers are working hard to meet booming consumer demand for organic food since 2012, more than 90 percent of retailers have increased the number of organic foods they sell.<sup>62</sup> The vast majority of organic food, 93 percent, is sold in conventional supermarkets.<sup>63</sup>

#### 3. Organic "looks like America"

The demographics of organic buyers closely follow the diversity of the American population, with a growing numbers of African American and Hispanic families choosing organic, according to the latest survey by the Organic Trade Association.<sup>64</sup> Over 82 percent of U.S. households report buying organic, and millennials are choosing organic products at record rates and are expected to purchase even more as they become parents<sup>65</sup>

#### 4. Concern about pesticides

Fifty percent of Americans report being concerned about chemicals in their food, and 48 percent are concerned about pesticide residues.<sup>66</sup> Consumers cite avoiding pesticides and protecting the health of themselves and their children as the top two reasons to purchase organic.<sup>67</sup> In a recent Natural Grocers survey, 90 percent of organic consumers said they choose organic food "to avoid pesticides."<sup>68</sup>

#### 5. Food for the bees

A growing number of consumers also care about the plight of pollinators and report that they would be more likely to shop at stores that take steps to protect pollinator health, according to a survey conducted by Friends of the Earth and SumofUs. Figure 3 shows results from a 2016 poll of 1,119 people nationwide. Figures have been weighted and are representative of all U.S. adults aged 18 and up.



Swarming the Aisles II 2018

# V. STATE OF THE SCIENCE



## A. The Problem: Overuse of agricultural pesticides

The overuse of agricultural pesticides threatens our ability to continue feeding ourselves sustainably. Researchers looking at recent declines in insect populations warn of "ecological Armageddon."<sup>69</sup> Their findings show that total insect biomass in German nature preserves fell by 76 percent over the past 27 years, with agricultural pesticide use a key culprit.<sup>70</sup> Pesticides are a significant threat to endangered species and are key drivers in the decline of invertebrate pollinating species, 40 percent of which are on the brink of extinction, according to a UN meta-analysis.<sup>71, 72</sup>

We are contending with a second "silent spring," not only for life aboveground, but for the soil microorganisms that are the basis of dynamic ecological farming systems. Research shows that pesticides are highly toxic to soil microbial activity, can have unintended effects that are significantly detrimental to soil microflora, and damage soil enzymes, which are crucial to soil health.<sup>73,74,75</sup>

#### 1. The pesticide treadmill

Farmers are trapped on a pesticide "treadmill" — as weeds and pests develop resistance, more and stronger pesticides are called for. Glyphosate-resistant "superweeds" now plague more than 60 million acres of U.S. farmland, thanks to widespread planting of RoundUp Ready© GMO crops.<sup>76</sup> The pesticide industry is responding with crops engineered to resist antiquated, hazardous pesticides like 2,4-D and dicamba. These pesticides are highly toxic to broadleaf crops and harm neighboring fields, as evidenced by the massive farmer outcry sparked by the introduction of dicambaresistant soybeans.<sup>77</sup> In 2017, more than 3.6 million acres of crops were harmed by dicamba drift across 25 states.<sup>78</sup> Rather than continue on the treadmill, farmers need tools and support to transition to farming methods that decrease the need for pesticides in the first place.

#### 2. Pesticide residues on food have increased

Eating foods with pesticide residues is the primary way consumers are exposed to pesticides. Studies show that an organic diet rapidly and dramatically reduces people's exposure to toxic pesticides.<sup>79 80,81,</sup>

New data released recently by the U.S. Food and Drug Administration show a rise in the occurrence of pesticide residues detected in thousands of samples of commonly consumed foods.<sup>82</sup> Overall, about 50 percent of domestic food and 43 percent of imported food sampled showed pesticide residues. That is up from about 37 percent of domestic and 28 percent of imported food found with residues in 2010, and up from 38.5 percent and 39 percent, respectively, found by FDA in 2005. Samples of fruits and vegetables showed the highest frequency of pesticide residues. Roughly 82 percent of domestic American fruits and 62 percent of domestic vegetables carried residues of weed killers, insecticides and other pesticides. Among the domestic food samples, FDA

22

said 97 percent of apples, 83 percent of grapes, 60 percent of tomatoes, 57 percent of mushrooms and 53 percent of plums carried residues.

Although the Environmental Protection Agency (EPA) sets legal limits, referred to as "maximum residue limits" (MRLs) for pesticide residues on foods, some have argued that they may not be set low enough to protect people who are the most vulnerable to pesticide exposure, including infants and children. Some data indicate adverse health effects resulting from exposure to pesticides at levels below these limits.<sup>83</sup> What's more, MRLs are based on estimated exposure to an individual pesticide, but when we eat non-organic food, we are exposed to many pesticides at once. For example, 29 percent of 706 conventional strawberry samples analyzed by the U.S. Department of Agriculture Pesticide Data Program had residues from 10 or more pesticides.<sup>84</sup> These cumulative exposures add up. One study found that approximately 40 percent of U.S. children may have cumulative exposure to organophosphate pesticides at a level greater than benchmarks for neurological impacts.85

#### 3. Pesticides of concern

American farmers use more than one billion pounds of pesticides annually, including pesticides that have been restricted in other jurisdictions because they are known to be toxic to pollinators and/or people, such as neonicotinoids, glyphosate and chlorpyrifos.<sup>86</sup> (See Appendix IV for a full list of pollinator-toxic pesticides.)

#### a. Neonicotinoids

The world's most widely used insecticides, neonicotinoids (neonics), are a primary culprit in recent bee declines. In a 2014 review of more than 1,100 peer-reviewed studies, 29 independent scientists from across the globe working together on the Task Force on Systemic Pesticides called for immediate regulatory action to restrict neonicotinoids based on their toxicity to a range of threatened species, including bees.<sup>87</sup> In 2017, this task force released a follow-up meta-study on neonicotinoids and other systemic insecticides that found even broader impacts and reinforced earlier conclusions. The scientists concluded that neonicotinoids represent a major worldwide threat to biodiversity and ecosystems and called for an immediate stop to agricultural uses of systemic pesticides.<sup>88</sup> A recent analysis from the University of California-San Diego found that neonics are more harmful to honeybees than scientists had thought, acting synergistically with the nutrient-poor diet bees experience in intensive farming systems to increase their likelihood of death by 50 percent.89

Neonics are used on 140 crops, and the majority of corn and a large percentage of soy, wheat and canola seeds are coated with them.<sup>90</sup> Plant roots readily absorb these water-soluble pesticides, which are transported systematically in the plant's vascular system to other portions of the plant, including roots, pollen, nectar, leaves, stems and fruit.<sup>91</sup> This results in the exposure of beneficial, non-target insects, such as bees and other pollinators, to potentially lethal doses. Even low levels of exposure can impair foraging abilities and navigation;<sup>92</sup> disrupt learning, communication and memory;<sup>93</sup> reduce fecundity<sup>94</sup> and queen production;<sup>95</sup> and suppress the immune systems of bees<sup>96</sup>, making them more vulnerable to disease and pests. Neonicotinoids are persistent, lasting for years in the soil.<sup>97</sup>

Neonics harm both managed and native bees. The largest field study ever conducted on neonicotinoids found that bees that fed on plants treated with these pesticides suffered decreased survival and immune responses<sup>98</sup>. Another study, released in 2017, found that bumblebee queens exposed to neonicotinoids were 26 percent less likely to lay eggs, compared to queens that weren't exposed. Researchers found that this rate of decline could lead to extinction of wild bumblebee populations;<sup>99</sup> more than 700 North American bee species are in decline.<sup>100</sup>

Neonics not only harm bees, they also harm many other organisms essential for natural pest control and sustainable food production, including birds, bats, butterflies, dragonflies, lacewings, ladybugs, earthworms, small mammals, amphibians, aquatic insects and soil microbes — putting food production and the environment in jeopardy.<sup>101,102,103,104,105,106,107,108,109,110</sup>

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Scientists concluded that neonicotinoids represent a major worldwide threat to biodiversity and ecosystems and called for an immediate stop to agricultural uses of systemic pesticides

-Task Force on Systemic Pesticides

#### b. Glyphosate

The rapid increase in the use of glyphosate on crops located along the monarch butterfly's migration route has virtually wiped out milkweed — the only food young monarch caterpillars eat.<sup>111</sup> In the past 20 years, the monarch butterfly population has declined by 90 percent.<sup>112</sup> Today, experts estimate that monarch butterflies would need nearly a fivefold increase to return to a stabilized population.<sup>113</sup>

Data links the loss of monarchs to glyphosate, the most widely used herbicide in the world<sup>114</sup> and an active ingredient in Monsanto's Roundup® products.<sup>115</sup> Across the Midwest, millions of acres of land are planted with Roundup Ready® corn and soybeans that have been genetically engineered to be tolerant to glyphosate, allowing farmers to spray this herbicide more frequently. In a toxic cycle, increased use of glyphosate has led to rising levels of weed resistance, which, in turn, has spurred even greater use of glyphosate and other hazardous herbicides.<sup>116</sup> The World Health Organization recently determined that glypohsate is a probable human carcinogen.<sup>117</sup>

#### c. Chlorpyrifos

Another pesticide contributing to pollinator declines is chlorpyrifos. It is one of the most widely used organophosphate insecticides in the world and is sprayed on many common crops, including almonds, strawberries, broccoli, wheat, apples and citrus. Studies indicate that chlorpyrifos threatens the survival of bees and other pollinators<sup>118,119</sup> and is likely to harm approximately 1,800 plants and animals, many of them critically endangered, including species of wild bees.<sup>120</sup>

Chlorpyrifos not only threatens biodiversity, it also harms human health. It is so hazardous that even small amounts can have a devastating impact.<sup>121</sup> Based on the strong science demonstrating health concerns, the pesticide was banned for home use in 2001, but it continues to be used in agriculture. Chlorpyrifos is a neurotoxic pesticide most notoriously known for its link to developmental problems in children.<sup>122</sup> Prenatal exposure to chlorpyrifos has consistently been associated with lower birth weight, reduced IQ, attention disorders and delayed motor development.<sup>123</sup> Whenever chlorpyrifos is sprayed, it can cause immediate and long-term health problems in children, farmers, farmworkers and others who are exposed.

## B. The Solutions: Organic and regenerative farming

We need a two-fold approach to protecting pollinators and people from toxic pesticides. We must simultaneously expand organic farming while reducing pesticide use on non-organic farms. This section details the science behind organic and other ecological approaches to farming, while the next section provides guidance for retailer action.

Organic and ecological farming methods like crop rotation, cover cropping, biological control using insects and compost instead of synthetic fertilizers result in greater weed and pest control with limited or no toxic chemicals. These methods are the basis of organic farming and can also be implemented on non-organic farms. They provide a range of environmental benefits, including healthier soil with greater water-holding capacity and increased carbon sequestration potential, less water pollution and lower greenhouse gas emissions, and farmland that is welcoming to pollinators and other beneficial organisms.

#### 1. Organic agriculture

The science is clear that organic farming is not only better for pollinators, it is essential to a healthier food system for all: for our health, our families and our communities; the farmers and farmworkers who grow our food; the land that provides us with nourishment; the animals we raise to feed us and the ecosystems that sustain all of life. On organic farms, pollinators are welcomed and supported by a less toxic and often food-rich environment. Organic farms support up to 50 percent more pollinating species than conventional farms, help other beneficial insects flourish and foster biodiversity.<sup>124,125</sup> Other studies confirm that organic farm management practices increase the prevalence of pollinator-friendly plants and pollinator diversity, including honeybees as well as native and wild pollinators.<sup>126,127 128,</sup>

While non-organic farmers are allowed to use more than 900 synthetic pesticide products, organic farmers have restricted access to just 25.<sup>129</sup> Organic certification prohibits the use of neonicotinoids, glyphosate, chlorpyrifos and many other pollinator-toxic pesticides. What's more, the National Organic Standards Board regularly reviews the list of substances allowed in organic agriculture to ensure that they are the least toxic alternatives.<sup>130</sup> Organic standards allow farmers to use pesticides only as a last resort. Organic certification requires an "Integrated Pest Management" plan that prioritizes non-chemical and ecological methods of pest control; non-organic producers face no such requirements.

#### a. Benefits of organic agriculture

Along with pollinator protection, organic farming systems provide a range of other important benefits for people and the planet. Not only can organic farming yield enough output to feed a growing population, it also helps protect and regenerate the ecological basis of food production.<sup>131,132</sup> A series of expert consensus reports over the past decade affirm this evidence and make it clear that ecological approaches to farming are fundamental to feeding all people, now and in the future.<sup>133</sup>

Compared with non-organic agriculture, organic farming uses less energy and emits fewer greenhouse gases.<sup>134</sup> Organic systems provide greater resilience in the face of climate-related weather problems like drought and floods by improving soil structure and soil water-holding capacity.<sup>135,136,137</sup> By sequestering more carbon in the soil than non-organic practices,<sup>138</sup> organic and other conservation-based farming systems are important climate change mitigation strategies.<sup>139</sup>

Organic agriculture also outperforms conventional agriculture on measures of economic stability and well-being.<sup>140</sup> Organic farming systems are more profitable for farmers and boost local economies.<sup>141</sup> One study found that in U.S. counties with high levels of organic production, median household incomes are higher and poverty levels are reduced.<sup>142</sup> Importantly, organic farming protects the health of consumers, farmers, farmworkers and rural communities by eliminating the use of highly toxic pesticides.<sup>143</sup> millions of dollars' worth of organic food is imported from Turkey, Romania, China, India and other countries to meet U.S. demand.<sup>145</sup> The U.S. accounts for 44 percent of the global organic market but just five percent of global farmland under organic production.<sup>146</sup> Data demonstrate that U.S. farmers are interested in shifting to organic production, but they will need policies and market opportunities to help them do so. Learn more in Expanding Organic Production in the United States by the National Organic Coalition.<sup>147</sup>

> Retailers have an important role to play in expanding organic agriculture in the U.S. by supporting farmers during transition, prioritizing products from domestic organic farmers and advocating for public

Retailers have an important role to play in expanding organic agriculture in the U.S. by supporting farmers during transition, prioritizing products from American organic farmers and advocating for public policies to advance the American organic sector. This is a win-win-win: Organic agriculture provides greater economic well-being to farmers and rural communities, pollinators and people are protected from toxic pesticides, and food retailers will be guaranteed a reliable supply of high-quality organic products.<sup>148,149</sup>

policies that will advance the American

organic sector.

Of the retailers we analyzed, Costco, Target, Wegmans and Whole Foods are the only companies that have publicly announced measures to support U.S. organic farmers or to expand U.S. organic production. Costco is contracting with Nebraska ranchers to raise cattle on organically managed fields, and in a model that could be applied across the U.S., the company is working with produce farmers in Baja California to help them buy 1,200 acres of land and purchase farm equipment<sup>150</sup>. Target began a new line of organic "farm to shelf" products in 2015, employing innovative practices such as forward contracting and assisting farmers with federal regulatory hurdles.<sup>151</sup> Wegmans has a substantial investment in its 180-acre Organic/BioDynamic Farm and Orchard in upstate NY, where the company learns, and shares with its growers, ways to produce more organic fresh fruits, vegetables and wheat.<sup>152</sup> Finally, Whole Foods created a loan program for small, local, independent producers, including organic farmers, to help them expand their businesses.<sup>153</sup>

#### b. The need to grow domestic organic

Consumer demand for organic products is growing by double digits each year, but U.S. production of organic crops is not keeping pace.<sup>144</sup> The gap between U.S. demand and production is increasingly being filled by imports — tens of

## 2. Ecological farming methods to reduce overall pesticide use

Given that the vast majority of U.S. agriculture is still nonorganic, the greatest pesticide reduction benefits will come from reducing pesticide use on conventional farms. The great news is that recent studies show that most farmers could dramatically reduce their overall pesticide use while maintaining productivity and profitability, and, in some cases, could improve yields and decrease farm costs.<sup>154</sup> Specific examples of this phenomenon exist for neonicotinoids. One study shows that the more neonics were used to treat rapeseed crops, the more yields declined because the pesticides harm or kill the pollinators on which the crop depends.<sup>155</sup> Recent analyses by the EPA and Practical Farmers of lowa found that neonicotinoid-coated soybean seeds offer little to no economic benefit to farmers, and that associated economic and environmental losses outweigh potential gains.156,157

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Most farmers could dramatically reduce their pesticide use while maintaining productivity and profitability

-Lechenet et al., 2017, Nature Plants

Pesticide reduction on non-organic farms must go handin-hand with shifting to alternative pest management practices like cover cropping and crop rotations. These are collectively known as agroecological farming techniques (Figure 4). They are physical, cultural, mechanical and biological methods that manage pests while reducing the need for pesticide applications. These methods are the basis of organic agriculture, are the cornerstones of Integrated Pest Management, and can be implemented by any farmer.

Other practices to ensure that pesticides are used only when necessary include enacting guidance that requires growers to provide an adequate justification to trigger use of a pesticide and choosing pest control advisors who are independent from any pesticide company. For more information about how to implement these practices in your supply chain, contact Friends of the Earth.

#### 3. Avoiding the pitfall of regrettable substitution

Using ecological farming practices to reduce pesticide use avoids the pitfall of regrettable substitution, or replacing one toxic chemical with another that has unknown or lesserknown toxic effects. For example, over the past decade, many farmers decreased use of organophosphate pesticides like chlorpyrifos, but relied on increased use of neonicotinoids to do so. Rather than implementing farming practices that decreased the need for pesticide applications, this continued a "pesticide treadmill" where certain forms of toxicity are substituted for others.

#### Figure 4: Agroecological farming methods

- Conservation cover (in perennial crop systems, maintain permanent ground covers of native grasses and forbs for weed control and natural enemy refuge)
- Beetle banks (establish bunch grasses to promote predatory ground beetles)
- Companion planting (plant species next to one another that enhance one another's growth and protect on another from pests)
- Intercropping (with crops that are attractive or useful to beneficial insects)
- Pheromone traps
- Timing of planting or harvest
- Physical barriers (e.g., floating row covers, fruit bagging

- Sanitation
- Trap cropping
- Crop rotation
- Mulching (for weed control)
- Eliminate alternate hosts or sites for pests and disease
- Resistant varieties (insect pest and disease control)<sup>+</sup>
- Soil solarization (for nematodes and soil borne diseases)
- Mating disruption
- Maturity date selection (to avoid pest populations)
- Kaolin clay

## VI. INDUSTRY



#### **Industry Leadership - Pesticides**

Companies all along the supply chain are demonstrating leadership on pesticides and pollinator health by phasing out pollinator-toxic pesticides in their supply chains, planting pollinator habitat and supporting farmers to transition to an integrated pest management (IPM) approach.

**ALDI**, a German supermarket chain, became the first major retailer to ask<sup>158</sup> its German and Dutch fruit and vegetable suppliers to stop using eight pesticides hazardous to bees. ALDI also announced<sup>159</sup> in January 2016 that it is expanding its selection of organic meat and produce in its U.S. stores.

**Whole Foods** issued<sup>160</sup> its Responsibly Grown product rating system in 2014, which grades fresh fruit, vegetables and flowers as "good, better or best" based on established criteria, including pollinator protection. It encourages its suppliers to eliminate or reduce highly toxic pesticides, including four of the most commonly used neonicotinoid pesticides.

**General Mills** invested<sup>161</sup> \$4 million in pollinator habitat and is working to disseminate guidance<sup>162</sup> to growers of key commodities, such as corn and soy, on how to protect and minimize the impact of neonicotinoids and other pesticides on pollinators.

Pop Weaver<sup>163</sup>, Pop Secret<sup>164</sup> and Preferred Popcorn<sup>165</sup> announced phase-outs of neonicotinoids on corn seed.

**Lamb Weston/ConAgra Foods** instituted an IPM Program<sup>166</sup> and a grower Information Edge Program, which consolidates IPM data and centralizes information. As part of the Potato Sustainability Initiative,<sup>167</sup> the company has adopted specific criteria to minimize pesticide use to protect pollinators.

**Sysco** adopted<sup>168</sup> a Sustainable Agriculture/Integrated Pest Management program. The program includes 50 crops for 74 Sysco brand suppliers of canned and frozen fruit, vegetables and potatoes, which covers 180 food factories and nearly 900,000 cultivated acres. Suppliers that participate must track their pesticide use and aim to reduce the product's toxicity.<sup>169</sup> In 2013, Sysco suppliers reported avoiding 4.6 million pounds of pesticides and 18.8 million pounds of chemical fertilizer. In 2014, Sysco adopted standards under the program to encourage Sysco brand suppliers to protect and create habitat for pollinators.

#### Industry Leadership - Organic

27

Along with increasing organic offerings, leading companies are helping build the organic value chain. They are supporting farmers during the three-year transition from conventional to organic, establishing more secure contracts between buyers and sellers, helping purchase and secure access to land and building needed supply chain infrastructure.

**Whole Foods** created a loan program<sup>170</sup> for small, local, independent producers, including organic farmers, to help them expand their businesses.

**PCC Natural Markets** supports preservation of farmland through PCC Farmland Trust,<sup>171</sup> which the Seattle-based co-op founded in 1999.

**Target** set a goal to increase its organic food and beverage offerings by 25 percent by 2017 and met and exceeded<sup>172</sup> the goal two years early. Target also began a new line of organic "farm to shelf" products in 2015, employing innovative practices such as forward contracting and assisting farmers with federal regulatory hurdles. A percentage of each purchase from the Beekman 1802 Farm Pantry products go towards supporting small farms.<sup>173</sup>

**Costco** is contracting<sup>174</sup> with Nebraska ranchers to raise cattle on organically managed fields, and in a model that could be applied across the U.S., the company is working with produce farmers in Baja California to help them buy 1,200 acres of land and purchase farm equipment.

**The Organic Grain Collaboration** is a precompetitive industry effort led by organic food companies to increase the domestic supply<sup>175</sup> of organic grain in the United States, improve market access for organic grain farmers and improve the resiliency of organic grain production.

**Nature's Path** has purchased 5,640 acres<sup>176</sup> to lease to organic family farmers, including Vilicus Farms in northern Montana. They share risk<sup>177</sup> with the farmers through a crop share leasing program and support farmers to educate the next generation of new farmers.

**Clif Bar** helped one of its growers, San Joaquin Figs, tackle the cost of transitioning 300 acres<sup>178</sup> of figs to organic by agreeing up front to buy those figs for seven years after they receive organic certification. In addition, Clif Bar agreed to purchase the grower's smaller, pre-existing organic fig supply during the three-year transition.

**Clif Bar and Organic Valley** invested \$2 million to establish<sup>179</sup> a University of Wisconsin-Madison endowed chair to support organic plant breeding research to help address the critical shortage in organic seed<sup>180</sup> supply.

**Kashi** developed a certified transitional<sup>181</sup> program to create a new market for U.S. farmers in the three-year transition to organic certification.

**General Mills** committed<sup>182</sup> to double the organic acreage from which it sources ingredients by 2019, including a partnership<sup>183</sup> with Organic Valley to drive more acres in the U.S. into organic certification.

Swarming the Aisles II 2018 🎛

## VII. RECOMMENDATIONS AND OPPORTUNITIES FOR SUCCESS



#### A. Recommendations for retailers

#### 1. Vision for change

Friends of the Earth, with the support of more than 50 other organizations,<sup>184</sup> is working with retailers on the following goals. These actions will create a more regenerative and resilient food supply and will meet growing consumer demand for transparency, health and sustainability in the food supply. With a focus on American farmers, these actions will bring the benefits of organic and ecological farming home to U.S. farms and communities.

REDUCE PESTICIDES	GROW ORGANIC
Establish a pollinator protection policy that includes the phase out of neonicotinoids, glyphosate, chlorpyrifos and other pollinator toxic pesticides as well as implementation of alternative, least-toxic pest management strategies in the company's supply chain	Increase USDA certified organic food and beverages to 15 percent of overall offerings by 2025, prioritizing American farmers
INCREASE TRA	ANSPARENCY
	Publicly disclose company policies and progress related to these actions

#### 2. Company leadership in Washington D.C.

Friends of the Earth strongly encourage companies to advocate for public policies aimed at reducing agricultural pesticide use, protecting pollinators and supporting the expansion of organic agriculture in the U.S.

There is a great need for company leadership in Washington D.C. to encourage increased federal investment in organic agriculture. Federal support has not kept pace with the growth of the organic market. For example, less than two percent of U.S. public agricultural research funding goes to organic and biologically diversified farming.<sup>185</sup> Supporting the expansion of domestic organic farming is a win-win for food retailers and American farmers. For retailers, strengthening the domestic organic sector will ensure a steady supply of high-quality products that maintain consumer confidence in the organic label while meeting growing demand for local, regional and domestic food. (See Recommendations for Congress below for information about specific policies.)

#### 3. Looking to the Future: Seeds for bees

One of the biggest pesticide-reduction wins for pollinators in conventional farming systems would be elimination of neonicotinoid seed coatings on crops like soy, corn, wheat and canola. While neonics can be applied as sprays, soil drenches, trunk injections and in other forms, the primary use of these chemicals is as a seed coating for annual field crops planted on at least 150 million acres across the U.S.<sup>186</sup>

Neonic-coated corn seed is the most extensive use of an insecticide on any crop in the nation, affecting close to 90 million acres of farmland, along with the broader environment.<sup>187</sup>

Depending on the crop, only about five percent of the active chemical in the seed coating enters the plant, but even this small amount makes the plant highly toxic to bees. The remaining 95 percent of the chemical pollutes the environment through seed dust or soil contamination and water runoff, creating myriad ways for bees and other organisms to come into contact with these toxic insecticides.<sup>188</sup>

Recent analyses from EPA and Practical Farmers of Iowa concluded that coated soybean seeds offer little to no economic benefit to farmers and that associated economic and environmental losses outweigh potential gains.<sup>189,190,191</sup> Other studies have demonstrated that ecological farming methods eliminate the need for seed coatings while maintaining high crop yields.<sup>192,193</sup>

Yet, farmers have little to no access to uncoated seeds in the marketplace.<sup>194</sup> Food retailers could play a crucial role in fostering farmer choice by creating market demand for crops grown from uncoated seeds.



#### B. Recommendations for Individuals

- **Take action and raise your voice locally.** Let your local food retailer know you want to purchase food grown without pollinator-toxic pesticides and support retailers that prioritize offering organic food and beverages.
- Buy pollinator-safe food. Avoid buying food grown with pollinator-toxic pesticides and prioritize purchasing organic food and beverages.
- Support public policies that eliminate the use of neonicotinoids, glyphosate, chlorpyrifos and other pollinator-toxic pesticides and that support the expansion of organic and ecological farming in the U.S.
- Join Friends of the Earth's BeeAction campaign at www.foe.org/beeaction.

## C. Recommendations for cities, counties and states

- **Buy certified organic food and beverages:** Use food procurement contracts to purchase organic food and beverages. Develop specifications and insert them into your bid solicitation(s) for these products.
- Support and pass policies to eliminate use of neonicotinoids, glyphosate, chlorpyrifos and other pollinator-toxic pesticides. Adopt policies that incentivize transition to organic production; increase research into diversified and agroecological production methods; support localized processing and distribution infrastructure; increase access to land for new, beginning and disadvantaged farmers; and educate the next generation of sustainable farmers.

#### **D.** Recommendations for Congress

- Pass the Pollinator Recovery Act (not yet introduced)
   To support the development and adoption of novel integrated pest and vegetation management practices that reduce the application of pollinator-toxic insecticides and herbicides that can impact pollinator health and the abundance of habitat and forage. Requires the US Department of Agriculture to consider regionally appropriate, pollinator-friendly seed mixes when developing and implementing conservation plans and offers financial and technical assistance for growers to implement a variety of conservation practices and restoration efforts on active and retired lands.
- Pass the Saving America's Pollinators Act (H.R. 3040) To suspend seed treatment, soil application or foliar uses of certain neonicotinoid pesticides on bee-attractive plants until all of the scientific evidence is reviewed by the U.S. Environmental Protection Agency and field studies can be done to evaluate both short- and longterm effects of these pesticides on pollinators.

- Pass the Protect Children, Farmers, and Farmworkers from Nerve Agent Pesticides Act (S. 1624)
   To prohibit the use of chlorpyrifos on food, and for other purposes.
- Pass the Organic Agriculture Research Act (H.R. 2436) To increase funding for USDA's Organic Research Extension Initiative (OREI) from \$20 million to \$50 million annually. OREI funds applied research projects across the country that help organic farmers improve their operations and meet the growing consumer demand for organic food.
- Pass the Homegrown Organic Act (H.R. 3637) To help American farmers make the transition to organic farming. The act would modify existing voluntary agricultural conservation programs to better assist producers who want to switch to organic and to provide transitioning producers with valuable technical and financial assistance, as well as make more farmland available to producers wanting to farm organically.
- Pass the Organic Farmer and Consumer Protection Act (H.R. 3871)

To increase funding for the National Organic Program and improve oversight for global certification in order to level the playing field for U.S. farmers.

• Pass a strengthened and expanded Conservation Title in the 2018 Farm Bill<sup>195</sup>

To ensure that farmers and ranchers have access to a variety of tools to conserve, manage and enhance shared natural resources while simultaneously promoting increased productivity and sustainability of their operations.

 Pass the Food and Farm Act (H.R. 4425)
 To create a Farm Bill that resets spending priorities, promotes healthy food, and provides innovative, performance-based solutions to environmental challenges.





## F. Recommendations for the U.S. Environmental Protection Agency:

- Suspend the registrations of neonicotinoids, glyphosate and chlorpyrifos for agricultural as well as cosmetic and other uses, pending the results of pesticide re-evaluation.
- Require a bee hazard statement on the label of all products containing systemic insecticides toxic to pollinators, including soil drenches and foliar-use products.
- Prioritize the systemic insecticides for Registration Review and ensure inclusion of independent, peerreviewed research on the acute and chronic effects of systemic insecticides on bees.
- Expedite the development and implementation of valid test guidelines for sub-lethal effects of pesticides on pollinators and require data from these studies for all currently registered and any new pesticides.
- Require testing and reporting of synergistic effects between pesticides in Registration Review to reduce the probability of interactive effects amplifying the toxicity of neonicotinoid insecticides.

31

# VIII. CONCLUSION





The science is clear that pesticide reduction — to protect pollinators, people and the environment — needs to be a leading issue on food retailers' sustainability agendas. Companies can be leaders in pollinator protection by phasing out toxic pesticides in their non-organic supply chains, supporting non-organic farmers to adopt alternative pest management strategies and regenerative farming techniques that decrease the need for pesticide use, and helping more American farmers transition to organic production. Along with market leadership, companies must stand up to support public policies that seek to expand organic and ecological farming and reduce pesticide use in the United States.



#### Appendix I.

34

#### **Retailer Summaries**

Information in this section and throughout the report comes from companies' responses to the survey (Appendix III), follow-up calls and emails, as well as public statements, publicly available information on retailer websites, corporate social responsibility reports, annual reports, SEC filings and media coverage. Friends of the Earth encourages food retailers to contact us directly with any additional relevant information.

		Ahold Delhaize (Overall grade: C)
Organic	С	According to Ahold Delhaize's "Supplementary Report on Sustainable Retailing Performance," three percent of total sales are certified organic products. Ahold Delhaize has publicly available data on the percentage of overall offerings and/or sales of certified organic food. However, this data excludes Delhaize America. <sup>196</sup> While the company has set 2020 target goals on other sustainability issues, it has not adopted a publicly available policy regarding commitment to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Ahold Delhaize has no publicly available policy on pollinators or pesticides.
Transparency	В	The Delhaize Group's relevant store policies are available in its "Supplementary Report on Sustainable Retailing Performance," but that document did not disclose Ahold Delhaize America's store-specific information. A company representative from the Ahold Delhaize did not respond to the Friends of the Earth survey; a representative responded to Friends of the Earth by email to disclose relevant information.
		Albertsons (Overall grade: B)
Organic	<b>A</b> -	Albertsons outlines an organic policy and plans for continuing to grow organic offerings across meat, produce, service deli and bakery departments to contribute to strong sales in its 2017 SEC filing. <sup>197</sup> In January 2018, Albertsons Companies announced that its Own Brands label, O Organics, has become a \$1 billion brand. <sup>198</sup> The company expects to introduce 500 or more new products under the O Organics line in 2018 from produce, dairy and meats, to deli, snacks and baby items. Albertsons has publicly available data on the percentage of overall offerings and/or sales of certified organic food and has adopted a publicly available policy regarding commitment to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Albertsons has no publicly available policy on pollinators or pesticides.
Transparency	<b>A</b>	Albertsons' relevant store policies are available in its SEC Filings and on its website. A company representative responded to the Friends of the Earth survey and disclosed in writing all relevant information by email.
		ALDI U.S. (Overall grade: C)
Organic	С	According to press coverage, ALDI U.S. expanded its selection of fresh and organic meat and produce in 2016. <sup>199</sup> However, this information was only disclosed via third party, and ALDI does not provide public data on percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings in the future. The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	С	In 2016, press coverage indicated that ALDI planned to remove eight pesticides, including three neonicotinoids, from all products in its U.S. stores: thiamethoxam, chlorpyrifos, cypermethrin, clothianidin, deltamethrin, fipronil, imidacloprid, and sulfoxaflor. <sup>200,201</sup> However, nothing has been reported since that first announcement, and ALDI representatives have not responded to Friends of the Earth to confirm that the company has followed through on these plans.
Transparency	D	Information on relevant company policies or store offerings is disclosed only via third parties such as the press and industry research analyses. A company representative from ALDI did not respond to the Friends of the Earth survey or disclose all relevant information via other communications.
		Amazon (Overall grade: F)
Organic	F	Aside from the products it sells, Amazon has no mention of organics on its website and does not provide data on the percentage of overall offerings and sales of certified organic food. The company has not adopted a publicly available policy regarding commitment to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Amazon has no publicly available policy on pollinators or pesticides.

Transparency	F	Relevant policies and information are not available via official company communications or other publicly available sources. A company representative did not respond to the Friends of the Earth survey or disclose in writing all relevant information via other communications.
		BJ's Wholesale Club (Overall grade: B-)
Organic	В	BJ's reported in its 2014 corporate social responsibility report, "In 2014 our organic assortment increased by 20%." The report also stated, "We plan to grow our total organic assortment by over 30%, with our Wellsley Farms brand representing a majority of this growth." <sup>202</sup> While BJ's has adopted a policy stating a commitment to continue to increase overall certified organic food offerings, it does not provide data on percentage of overall offerings and/or sales of certified organic food. The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	С	For its home and garden products, BJ's reported in its 2014 corporate social responsibility report that it has worked with its vendors to eliminate neonicotinoids on plants and garden products to protect pollinators. <sup>203</sup> According to BJ's 2014 corporate social responsibility report, BJ's "…stopped selling retail pesticides containing neonicotinoids" and planned to "…require all our suppliers to provide plants not treated with neonicotinoids, with a few exceptions for specific plants…" by 2016. <sup>204</sup> BJ's has not adopted a pesticide policy related to food or beverages.
Transparency	С	Some of BJ's relevant store policies are available on its website or in its corporate social responsibility or sustainability reports. A company representative did not respond to the Friends of the Earth survey or disclose all relevant information via other communications.
		Costco (Overall grade: A-)
Organic	A	According to the CEO of Costco, the store "cannot get enough organics to stay in business day in and day out," so the company announced in 2016 that it is working with farmers to help them buy land and equipment to grow the organic supply chain. The company says it will be expanding the initiative <sup>205</sup> and works with its, "suppliers and growers to support the conversion of conventional supplies to organic." <sup>206</sup> Costco estimated sales of organic products equal \$4.5 billion. The store says it will continue to sell organic products and expects the selections and volumes to grow over time. <sup>207</sup> In 2016, Costco disclosed it is working to increase overall sales from 8 to 11 percent a year, versus 2 to 2.5 percent for food sales overall <sup>208</sup> and anticipates to more than double its organic sales by 2020 to exceed \$10 billion. <sup>209</sup> In 2018, it's organic certified offerings in fresh produce is at 23 percent and an additional 10 percent of its fresh produce is grown in greenhouses which do not use pesticides. <sup>210</sup> Costco has publicly available data on the percentage of overall offerings and/or sales of certified organic food and has adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. Costco has not adopted a publicly available goal to increase organic to 15 percent of overall offerings by 2025, prioritizing domestic, regional and local producers.
		suppliers of garden plants to limit the use of non-essential chemicals, discourages use of neonicotinoid insecticides on pollinator-attractive plants, and encourages use of eco-friendly methods of pest and disease control. <sup>211</sup>
Transparency	A	Costco's relevant store policies are available in its Fiscal Year 2017 annual report and via press. A company representative did respond to the Friends of the Earth survey and disclosed additional relevant information via other communications.
		CVS (Overall grade: C)
Organic	С	In its 2016 corporate social responsibility report, CVS disclosed that in 2015 it "doubled offerings of Gold Emblem Abound line of wholesome snacks." This line includes organic items. <sup>212</sup> In 2017, Supermarket News reported CVS is expanding its Gold Emblem Abound brand by 27 new items, which includes organic offerings. <sup>213</sup> CVS mentions certified organic food in publicly available policies but does not distinguish how many of its selections are specifically organic and does not provide public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	CVS has no publicly available policy on pollinators or pesticide reduction.
Transparency	В	Partial information regarding CVS's relevant store policies are available on its website or in its corporate social responsibility or sustainability reports.

	DeMoulas (Overall grade: C-)					
Organic	С	DeMoulas mentions certified organic offerings on its website and stated in 2016 that it was "expanding its offerings and seeing growth in areas that it might not have expected even five years ago, particularly in gourmet products and organic goods." <sup>214</sup> DeMoulas mentions certified organic food in publicly available policies but does not provide public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.				
Pesticides	F	DeMoulas has no publicly available policy on pollinators or pesticide reduction.				
Transparency	С	Some of DeMoulas relevant store policies are available on its website or in its corporate social responsibility or sustainability reports. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.				
	0	Giant Eagle (Overall grade: C-)				
Organic	С	Giant Eagle defines organic on its website. <sup>215</sup> Giant Eagle did not provide publicly available data on percentage of overall offerings and/or sales of certified organic food aside from saying it "offers thousands of organic products" in its 2014-2015 corporate social responsibility report. <sup>216</sup> The company has not adopted a publicly available policy stating a commitment to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.				
Pesticides	F	Giant Eagle has no publicly available policy on pollinators or pesticides.				
Transparency	С	Some of Giant Eagle's relevant store policies are available on its website or in its corporate social responsibility or sustainability reports. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.				
		H-E-B Grocery (Overall grade: C-)				
Organic	С	H-E-B Grocery launched a campaign in 2014 to make organic items, including pantry staples, produce and meat, widely available at affordable prices, which was to consist of hundreds of new products <sup>217</sup> and has "hundreds scheduled to hit shelves through the year," according to available information <sup>218</sup> . H-E-B defines organic on its website. <sup>219</sup> H-E-B mentions certified organic food in publicly available policies (defines certified organic) and outlines the number of organic products sold at the store, but does not provide public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.				
Pesticides	F	H-E-B Grocery has no publicly available policy on pollinators or pesticides.				
Transparency	С	Some of H-E-B relevant store policies are available on its website or in corporate social responsibility or sustainability reports. A company representative from H-E-B did not respond to the Friends of the Earth survey or disclose relevant information via other communications.				
Hy-Vee (Overall grade: C)						
Organic	С	Hy-Vee announced that it is working to increase the number of organic products on its shelves <sup>220</sup> and defines organic on its website. <sup>221</sup> Hy-Vee did not provide public data on the percentage of overall offerings and sales of certified organic food. Hy-Vee mentions certified organic food in publicly available policies (defines certified organic) and outlines the number of organic products sold at the store, but does not provide publicly available data on the percentage of overall offerings and/or sales of certified organic food a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.				
Pesticides	F	Hy-Vee has no publicly available policy on pollinators or pesticides.				
Transparency	В	Some of Hy-Vee's relevant store policies are available on its website or in its corporate social responsibility or sustainability reports. A company representative did not respond to the Friends of the Earth survey. A representative responded to Friends of the Earth by email to disclose relevant information.				

	-	Kroger (Overall grade: C)
Organic	В	Kroger's sales of organic and natural food totaled \$16 billion in 2016 <sup>222</sup> and its Simple Truth® Organic line accounted for approximately \$1 billion of that total. <sup>223</sup> There are more than 900 Simple Truth® or Simple Truth Organic™ unique products. <sup>224</sup> According to publicly available data, Simple Truth Organic is the largest organic brand (by volume) in the country. <sup>225</sup> Kroger provides public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. Although Kroger has not adopted a policy to expand organic offerings, the company states that it will add two additional organic products to its Simple Truth Organic™ line in 2018. <sup>226</sup> The company has not stated a commitment or taken actions to expand organic production in the United States.
Transparonov		Kroger has no publicly available policy on poliinators or pesticides.
Transparency	L	or sustainability reports. A Kroger company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
		Meijer (Overall grade: C-)
Organic	С	Meijer disclosed that it offers more than 300 organic products. <sup>227</sup> Meijer lists a number of organic products sold at the store but does not provide public data on the percentage of overall offerings and/ or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Meijer has no publicly available policy on pollinators or pesticides.
Transparency	С	Some of Meijer's relevant store policies are available on its website or in its corporate social responsibility or sustainability reports. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
	-	Publix (Overall grade: C-)
Organic	С	Publix disclosed it is expanding its private label offerings, which include organic items, <sup>228</sup> and defines organic on its website. <sup>229</sup> Publix mentions certified organic food in publicly available policies (defines certified organic) and reports the number of organic products sold at the store, but does not provide public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to increase overall certified organic food offerings. Publix has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Publix has no publicly available policy on pollinators or pesticides.
Transparency	С	Some of Publix's relevant store policies are available on its website or in its corporate social responsibility or sustainability reports. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
		Rite Aid (Overall grade: D+)
Organic	С	Rite Aid offers a variety of organic products, <sup>230</sup> and recent news articles disclosed that Rite Aid has remodeled 89 wellness stores, which offer organic food. <sup>231</sup> Rite Aid reports the number of organic products sold at the store, but does not provide public data on the percentage of overall offerings and/ or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to increase overall certified organic food offerings. Rite Aid has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Rite Aid has no publicly available policy on pollinators or pesticides.
Transparency	D	Information on relevant company policies or store offerings are disclosed only via third parties, such as the press and industry research analyses. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
		Smart & Final (Overall grade: D+)
Organic	С	Smart and Final started 2015 with 1,000 natural and organic products and has increased this number to 1,400 in its larger stores. This change helped the company increase its sales. <sup>232</sup> Smart & Final discloses the number of organic products sold at the store, but does not provide public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. Smart & Final has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Smart & Final has no publicly available policy on pollinators or pesticides.

Transparency	D	Information on relevant company policies or store offerings is disclosed only via third parties, such as the press and industry research analyses. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
		Supervalu (Overall grade: D+)
Organic	С	Supervalu launched its private organic brand in 2008, stating: "The brand's organic offerings are certified to be organically grown without the use of chemical fertilizers, herbicides and pesticides." <sup>233</sup> In 2015, Supervalu announced a 200-product expansion of its Wild Harvest line, which is 70 percent organic. <sup>234</sup> Supervalu reports the number of organic products sold at the store, but does not provide public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Supervalu has no publicly available policy on pollinators or pesticides.
Transparency	D	Information on relevant company policies or store offerings is disclosed only via third parties, such as the press and industry research analyses. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
	2	Target (Overall grade: C+)
Organic	<b>A</b>	Target set a goal of increasing its organic food offerings by 25 percent by 2017. It achieved the goal two years early and has increased its organic offerings by 139 percent since 2011. <sup>235</sup> In its 2015 corporate social responsibility report Target disclosed that it introduced a new program called Made to Matter to offer "leading natural, organic and sustainable brands" and in 2015 updated the program to offer options from 31 brands and more than 200 new and exclusive products. <sup>236</sup> Target reported that sales for these brands could hit \$1 billion in 2016 and brands featured in the program experienced a 30 percent increase in sales growth. Overall, Target told Fox News in 2015, its growth in the naturals and organics industry grows 1.5 percent faster than the overall market. <sup>237</sup> Further, Target's CEO said he wanted organic items to account for 60 percent of the company's baby food sales by 2016, up from 40 percent when he began his tenure. <sup>238</sup> Target also began a new line of "farm to shelf" products in 2015, with innovative practices including forward contracting and assisting farmers with federal regulatory hurdles. A percentage of each purchase from the Beekman 1802 Farm Pantry products goes toward supporting small farms. Target has publicly available data on the percentage of overall offerings and/or sales of certified organic food and has adopted a publicly available policy regarding commitment to increase overall certified organic food offerings. Target has not adopted a publicly available goal that meets Friends of the Earth's request — to increase organic to 15 percent of overall offerings by 2025, prioritizing domestic, regional and local producers.
Pesticides	F	Target has no publicly available policy on pollinators or pesticides.
Transparency	С	Some of Target's relevant store policies are available on its website or in its corporate social responsibility or sustainability reports. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
	0	Trader Joe's (Overall grade: C+)
Organic	В	Trader Joe's defines organic on its website <sup>239</sup> and says it sells "approximately four times more organic products than a typical grocery store" <sup>240</sup> Trader Joe's reports that more than 20% of the products customers purchase from its stores are organic, a trend the company sees continuing to grow. <sup>241</sup> The company has not adopted a publicly available policy stating a commitment to increase overall certified organic offerings. Trader Joe's has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Trader Joe's has no publicly available policy on pollinators or pesticides.
Transparency	В	Some of Trader Joe's relevant store policies are available on the company website. A company representative responded to the Friends of the Earth survey and disclosed additional relevant information via other communications.
		Wakefern (Overall grade: D+)
Organic	С	Wakefern launched its private organic brand, Wholesome Pantry, which offers more than 100 items, and, in 2016, said that number was expected to triple over several months. <sup>242</sup> Wakefern reports the number of organic products sold at the store, but does not provide public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.

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Pesticides	F	Wakefern has no publicly available policy on pollinators or pesticides.
Transparency	D	Information on relevant company policies or store offerings is disclosed only via third parties, such as the press and industry research analyses. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
		Walgreens (Overall grade: C+)
Organic	В	In 2017, Walgreen Nice!, a Walgreens-owned brand, rebranded its products to include a wider selection of organic offerings such as flavored popcorns, tortilla chips and honey. <sup>243</sup> Walgreens reports that FY19 organic offerings will remain the same, but as the company moves into FY20, it anticipates growing its organic product count by 50%, and for FY21 another 50%, taking the company to 20 items total or 6% of the total assortment. This growth would double Walgreens organic offerings over the next 3 years. <sup>244</sup> The company has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	F	Walgreens has no publicly available policy on pollinators or pesticides.
Transparency	В	All relevant policies and other relevant Information are not available via official company communications or other public sources. A company representative did not respond to the Friends of the Earth survey. A representative responded to Friends of the Earth by email to disclose relevant information.
		Walmart (Overall grade: C)
Organic	С	In its 2015 Global Responsibility Report, Walmart disclosed it was introducing low-priced, healthier product lines and affordable organic lines. The company launched Great Value Organics in April 2016 and now has over 160 products in this line. <sup>245</sup> It re-launched Wild Oats in April 2015 with a more affordable price point and claimed it saved its customers \$1.09 billion in Fiscal Year 2015 by offering low prices on fruits and vegetables. The CEO of its Sam's Club unit announced during a sales call in June 2015 that Sam's Club had increased its organic offerings by 20 percent since the beginning of that year, <sup>246</sup> and the company told Friends of the Earth in 2016, its organic product sales have almost doubled in the last two years and said Walmart is one of the largest retailers of organics. <sup>247</sup> Walmart reports the number of organic products sold at the store, but does not provide public data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. Walmart has not stated a commitment or taken actions to expand organic production in the United States.
Pesticides	С	In 2017, for its home and garden products, Walmart confirmed that its growers have eliminated neonicotinoids from approximately 80 percent of its garden plants. Walmart has also eliminated neonicotinoids in almost all its off-the-shelf gardening products. <sup>248</sup> The company does not have a pesticide policy related to food or beverages.
Transparency	D	Information on relevant company policies or store offerings is disclosed only via third parties, such as the press and industry research analyses. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.
		Wegmans (Overall grade: C)
Organic	B	Wegmans' sales of organic produce have increased annually by double digits, and the company has encouraged its growing roster of partners to transition more acreage to organic. <sup>249</sup> Today, organic produce accounts for 20 percent of the grocer's total produce sales, while five years ago it was around 11 percent, and 10 years ago it was at 2 percent. <sup>250</sup> The company has a substantial investment in its 180-acre Organic/BioDynamic Farm and Orchard in upstate NY, where Wegmans learns and shares with its growers ways to produce more organic fresh fruits, vegetables and wheat. <sup>251</sup> Wegmans mentions certified organic food in publicly available policies and reports increased offerings of organic produce sold at the store, but does not provide public data on the percentage of overall offerings and/or sales of certified organic food. Although Wegmans has not adopted a policy to expand organic offerings, the company has made substantial investments.
Pesticides	F	Wegmans has no publicly available policy on pollinators or pesticides.
Transparency	В	Some of Wegmans' relevant store policies are available on its website or in its corporate social responsibility or sustainability reports. A company representative responded to the Friends of the Earth survey and disclosed additional relevant information via other communications.

Whole Foods (Overall grade: A)				
Organic	A	Since 2005 Whole Foods' sales of organic have increased by more than 70 percent, and every year the company aims to increase the amount of organic products that it sells. <sup>252</sup> In 2015, Whole Foods reportedly sold \$3.6 billion of organic food, <sup>253</sup> and 30 percent of its total sales that year were organic products. <sup>254</sup> Whole Foods has publicly available data on the percentage of overall offerings and/or sales of certified organic food and has adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. The company has created a loan program for small, local, independent producers, including organic farmers, to help them expand their businesses. <sup>255</sup>		
Pesticides	В	Whole Foods adopted a Responsibly Grown rating system that seeks to protect pollinators from toxic pesticides and reduce pesticide use, including pollinator-toxic pesticides in produce. The rating system prohibits the use of four neonicotinoids on living garden and floral plants for outdoor use to receive a "good," "better" or "best" rating. Produce offerings are ineligible to receive a "best" rating if neonicotinoids were applied. Whole Foods has adopted a publicly available pollinator protection policy that includes a commitment to reduce or eliminate pollinator-toxic pesticides, but it applies only to certain categories of food products; it includes non-food products. <sup>256,257</sup>		
Transparency	A	Information on relevant store policies is available via Whole Foods' website and in its corporate social responsibility and sustainability reports, and a company representative was willing to disclose relevant information via responding to survey or other communications. The company said, "We continue our existing programs and policies that were in place when we last completed the FOE survey info. Still marching forward on pesticide and other sustainability issues." <sup>258</sup>		
		WinCo (Overall grade: D+)		
Organic	С	WinCo began expanding organic offerings and testing new organic produce sections in 2014. <sup>259</sup> The company tells customers how to find organic offerings on its website <sup>260</sup> and reports the number of organic products sold at the store, but does not provide publicly available data on the percentage of overall offerings and/or sales of certified organic food. The company has not adopted a publicly available policy stating a commitment to continue to increase overall certified organic food offerings. The company has not stated a commitment or taken actions to expand organic production in the United States.		
Pesticides	В	WinCo has no publicly available policy on pollinators or pesticides.		
Transparency	D	Information on relevant company policies or store offerings is disclosed only via third parties, such as the press and industry research analyses. A company representative did not respond to the Friends of the Earth survey or disclose relevant information via other communications.		



#### **Appendices**

#### Appendix I: Scorecard Methodology

Friends of the Earth reached out to 26 food retailers in the United States and asked them to respond to a survey regarding supermarket sustainability, organic food, pollinator protection and neonicotinoid pesticides in company supply chains. None of the retailers filled out and returned the survey. (See survey in Appendix III.) Retailers received over one month to respond. After sending this initial survey, we reached out via phone to all of the food retailers to conduct the survey.

For 25 of the retailers, we attempted to fill the survey out with publicly available data. We sent a follow-up letter and onepager to each of these retailers to verify that the information was correct and gave each one an opportunity to clarify any information that we would publish. We made it clear that we wanted to accurately reflect their policies. Five retailers responded to our letter.

For the 25 retailers, we compared policies, practices and sales information for each company regarding organics, pollinators, reduction of pesticides and transparency. (The scoring rubric is in Appendix II.) We used publicly available information and any information provided directly by the company. To find information on our grading criteria, we reviewed retailer websites, corporate social responsibility reports, annual reports, SEC filings and media coverage.

We used the information to create a scorecard that assesses the policies and commitments of U.S. food retailers on organic offerings, pollinator protection, pesticide reduction and transparency in their supply chains. We sent each retailer their grades and a copy of the rubric and gave them two weeks to respond with any additional information. Four retailers responded with additional information. The scorecard is intended to help consumers make educated choices about the food they are purchasing and to encourage companies in this industry to improve their sourcing policies. Appendix II describes how we used the criteria to assign grades.

#### Appendix II: Scoring Rubric

Organic				
_	<b>A</b> +	• Retailer has adopted a publicly available company policy or outlined a publicly available company metric or goal regarding commitment to increase overall domestic certified organic food and beverages to 15 percent of overall offerings by 2025, prioritizing domestic, regional and local producers.		
	A	• Retailer has adopted a publicly available company policy or outlined a publicly available company metric or goal regarding commitment to increase overall domestic certified organic food and beverages.		
		Retailer has stated a commitment or taken action to expand organic production in the United States.		
	Δ_	• Retailer has adopted a publicly available company policy or outlined a publicly available company metric or goal regarding commitment to increase overall certified organic food and beverages.		
	<b>A-</b>	• Retailer provides publicly available data on percentage of overall offerings and/or sales of certified organic food and beverages via SEC filings, corporate responsibility report, or other company documents.		
В	<ul> <li>Retailer provides publicly available data on the percentage of overall offerings and/or sales of certified organic food via SEC Filings, Corporate Responsibility Report, sustainability report, annual report, or other company pages or it is disclosed via third parties, such as the press and industry research analyses.</li> </ul>			
с	<ul> <li>Retailer has not adopted any policies regarding certified organic food and beverages and does not disclose data on the percentage of overall offerings and sales of certified organic food and beverages. Retailer does mention certified organic food or beverages in publicly available communications via SEC filings, corporate responsibility report, sustainability report, annual report or other company documents, or this information is disclosed via third parties, such as the press or industry research analyses.</li> </ul>			
D	<ul> <li>Re</li> <li>pei</li> <li>pui</li> <li>rep</li> </ul>	<ul> <li>Retailer has not adopted any policies regarding certified organic food and does not disclose data on the percentage of overall offerings and sales of certified organic food. Retailer does mention certified organic food in publicly available communications via SEC Filings, Corporate Sustainability Report, sustainability report, annual report or other company pages or it is disclosed via third parties, such as the press and industry research analyses.</li> </ul>		
F	• Re filii infe	tailer does not mention certified organic food or beverages in any publicly available materials, such as its SEC ngs, corporate responsibility report, sustainability report, annual report or other company pages, and this ormation is not disclosed via third parties, such as the press or industry research analyses.		

Pesticides			
Α	• Retailer has adopted a publicly available store-wide pollinator protection policy that includes a commitment to reduce or eliminate pollinator-toxic pesticides across all food, beverage and non-food product categories.		
В	• Retailer has adopted a publicly available pollinator protection policy that includes a commitment to reduce or eliminate pollinator-toxic pesticides that applies only to certain categories of food products and includes non-food products.		
С	• Retailer has adopted a publicly available pollinator protection policy to reduce or eliminate hazardous pesticide use on non-food or beverage products.		
D	• Retailer has adopted a publicly available pollinator protection policy, but does not have a policy to reduce or eliminate hazardous pesticide use.		
F	Retailer has no publicly available policy on pollinators or pesticides.		

Iransparency			
A	<ul> <li>All relevant policies, including offerings and/or sales of organic foods, are detailed and easily accessible on retailer's website, corporate social responsibility or sustainability report, and a company representative is willing to disclose in writing all relevant information via responding to survey or via other communications.</li> </ul>		
В	<ul> <li>Partial information on relevant store policies (does not disclose offerings and/or sales of organic foods) are available via retailer's website, corporate social responsibility or sustainability report, and a company representative is willing to disclose in writing all relevant information via responding to survey or via other communications.</li> </ul>		
С	<ul> <li>Information on relevant store policies is available via retailer's website, corporate social responsibility or sustainability report, but a company representative is not willing to disclose in writing all relevant information via responding to survey or via other communications.</li> </ul>		
D	<ul> <li>Information on relevant company policies or store offerings only disclosed via third parties, such as via the press and industry research analyses.</li> </ul>		
F	<ul> <li>All relevant policies and other relevant Information is not available via official company communications or other publicly available sources.</li> </ul>		

# Grading Scale awarded per category: Letter and<br/>percentage equivalents for grades awarded<br/>in each categoryLetter GradePercentageA100B89C79D69

59

F

42

equivalents for final grades awarded			
Final Grade	Percentage		
A+	100-97		
Α	96-93		
Α-	92-90 89-87		
B+			
В	86-83		
В-	80-82		
C+	79-77 76-73 72-70		
С			
C-			
D+	69-67		
D	66-63		
D-	62-60		
F	59-0		

Final grade awarded: Letter and percentage

#### **Appendix III: Survey questions**

#### Food Retailer Survey on Pollinator Protection and Organic Offerings

1) Does your company have a policy regarding sustainability in its supply chain?

A. Yes \_\_\_\_\_ No \_\_\_\_\_

#### 2) Does your company sell organic food and beverages?

A. Yes\_\_\_\_\_ No\_\_\_\_\_

B. If yes, then:

i. What percentage of your company's total food and beverage sales is certified organic?

ii. What percentage of certified organic food sold in your store is from your company's store brand product line(s)?

iii. Does your company prioritize sourcing from domestic and/or local producers? If yes, please describe any relevant policies or practices (e.g. specific sourcing goals, programs that support farmer transition, etc.).

iv. Does your company have a policy, vision or goal to increase organic offerings? If yes, please describe any relevant policies or practices (e.g. growth categories, specific sourcing goals, intention to expand store brand organic offerings, etc.).

C. What factors currently limit or prevent additional offerings of certified organic food and beverages?

D. What factors currently limit or prevent additional offerings of domestically-produced organic food and beverages?

#### 3) Does your company have a policy that addresses pollinator protection in its food and beverage supply chain?

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A. Yes \_\_\_\_ No \_\_\_\_

B. If yes, then:

i. Please explain how your company's policy addresses pollinator protection:

ii. What percentage of your company's food and beverage offerings are sourced in accordance with this policy (if the percentage is not available, please describe sales data, product categories, etc.):

C. What factors currently limit or prevent policies addressing pollinator protection in your company's food and beverage supply chain?

#### 4) Does your company track pesticide use in its food and beverage supply chain?

A. Yes\_\_\_\_ No\_\_\_\_\_

B. If yes, then:

i. Please explain how your company tracks this information:

ii. What percetage of your company's food and beverage supply chain is tracked utilizing this system (if the ` percentage is not available, please describe sales data, product categories, etc.):

C. What factors currently limit or prevent tracking and/or reducing the use of pesticides in your company's supply chain?

#### 5) Does your company have a policy that seeks to reduce pesticide use in its food and beverage supply chain?

A. Yes \_\_\_\_ No \_\_\_\_

B. If yes, then:

i. What percentage of your company's supply chain is sourced in accordance with this policy (if the percentage is not available, please describe sales data, product categories or other relevant information):

## 6) Does your company have a policy that addresses pollinator protection through pesticide reduction in its food and beverage supply chain?

A. Yes \_\_\_\_ No \_\_\_\_

B. If yes, then:

i. Please explain how your company's policy addresses pollinator protection:

ii. What percentage of your company's supply chain is sourced in accordance with this policy (if the percentage is not available, please describe sales data, product categories or other relevant information):



7) If you answered no to any of Questions 2-6, does your company have plans to implement a policy that addresses pollinator protection, pesticide use and/or organic offerings in the future? Please describe, including expected date of the policy.

8) Is there anything else you would like to tell us about your company's efforts to improve social and environmental responsibility in its supply chain?

Thank you very much! If you have questions regarding this survey and/or would like to discuss your company's current policies and practices, please contact Tiffany Finck-Haynes, Friends of the Earth, <u>beeaction@foe.org</u>, 202-222-0715.



#### Appendix IV: Pesticides of Concern

46

Top Ten Registered Pesticides for Acute Toxicity to Honeybees					
Active Ingredient	Chemical Class	Hazard to Bees			
Imidacloprid	Neonicotinoid	Acute & chronic toxicity, contaminates			
Clothianidin	Neonicotinoid	Acute & chronic toxicity, contaminates			
Fipronil	Pyrazole	Acute & chronic toxicity			
Thiamethoxam	Neonicotinoid	Acute & chronic toxicity, contaminates			
Abamectin	Macrolide	Acute toxicity			
Dinotefuran	Neonicotinoid	Acute & chronic toxicity, contaminates			
lambda-Cyhalothrin	Pyrethroid	Acute toxicity			
Fenithrothion	Organophosphorus	Acute toxicity			
Resmethrin	Pyrethroid	Acute toxicity			
Chlorpyrifos	Organophosphorus	Acute toxicity			

Additional EPA-Designated Insecticides Toxic to Bees, Butterflies and Other Pollinators					
Active Ingredient	Chemical Class	Hazard to Bees			
Acephate	Organophosphate	Acute toxicity			
Acetamiprid	Neonicotinoid	Acute & chronic toxicity, contaminates forage			
Aldicarb	N-Methyl Carbamate	Acute toxicity			
Alpha-cypermethrin	Synthetic Pyrethroid	Acute toxicity			
Amitraz	Acaricide/Insecticide	Acute toxicity			
Arsenic acid	Heavy Metal, Inorganic-Arsenic	Acute toxicity			
Azadirachtin	Botanical	Acute toxicity			
Bensulide	Organophosphorus	Acute toxicity			
Beta-cyfluthrin	Pyrethroid	Acute toxicity			
Bifenazate	Carbazate	Acute toxicity			
Bifenthrin	Pyrethroid	Acute toxicity			
Carbaryl	Carbamate	Acute toxicity			
Carbofuran	N-Methyl Carbamate	Acute toxicity			
Chlorethoxyfos	Organophosphorus	Acute toxicity			
Chlorfenapyr	Pyrazole	Acute toxicity			
Chlorpyrifos methyl	Organophosphorus	Acute toxicity			
Cyantraniliprole	Cyantraniliprole	Acute & chronic toxicity, contaminates forage			
Cyfluthrin	Pyrethroid	Acute toxicity			
Cypermethrin	Pyrethroid	Acute toxicity			
Cyphenothrin	Pyrethroid	Acute toxicity			
Deltamethrin	Pyrethroid	Acute toxicity			
Diazinon	Organophosphorus	Acute toxicity			
Dichlorvos	Organophosphorus	Acute toxicity			
Dicrotophos	Organophosphorus	Acute toxicity			
Dimethoate	Organophosphorus	Acute toxicity			
Diuron	Substituted phenylurea	Acute toxicity			
D-trans-allethrin	Pyrethroid	Acute toxicity			
Emamectin benzoate	Macrocyclic Lactone	Acute toxicity			

Endosulfan	Chlorinated Hydrocarbon Acute toxicity	
Esfenvalerate	Pyrethroid	Acute toxicity
Ethoprop	Organophosphorus	Acute toxicity
Etofenprox	Pyrehtroid Ether	Acute toxicity
Fenazaquin	Quinazoline	Acute toxicity
Fenpropathrin	Pyrethroid	Acute toxicity
Fluvalinate	Synthetic Pyrethroid	Acute toxicity
Fosthiazate	Organophosphorus	Acute toxicity
Gamma-cyhalothrin	Pyrethroid	Acute toxicity
Imiprothrin	Pyrethroid	Acute toxicity
Indoxacarb	Oxadiazine	Acute toxicity
Malathion	Organophosphorus	Acute toxicity
Metaflumizone	Semicarbazone	Acute toxicity
Methiocarb	N-Methyl Carbamate	Acute toxicity
Methomyl	N-Methyl Carbamate	Acute toxicity
Momfluorothrin	Pyrethroid	Acute toxicity
Naled	Organophosphorus	Acute toxicity
Oxamyl	Carbamate	Acute toxicity
Permethrin	Pyrethroid	Acute toxicity
Phenothrin	Pyrethroid	Acute toxicity
Phorate	Organophosphorus	Acute toxicity
Phosmet	Organophosphorus	Acute toxicity
Pirimiphos-methyl	Organophosphorus	Acute toxicity
Prallethrin	Pyrethroid	Acute toxicity
Profenofos	Organophosphorus	Acute toxicity
Propoxur	N-Methyl Carbamate	Acute toxicity
Pyrethrins	Botanical	Acute toxicity
Pyridaben	Acaricide/Insecticide	Acute toxicity
Rotenone	lsoflavones	Acute toxicity
Sethoxydim	Cyclohexanone	Acute toxicity
Spinetoram	Spinosyn	Acute toxicity
Spinosad	Spinosyn	Acute toxicity
Sulfoxaflor	Sulfoximines	Acute & chronic toxicity, contaminates forage
Tefluthrin	Pyrethroid	Acute toxicity
Tetrachlorvinphos	Organophosphorus	Acute toxicity
Tetramethrin	Pyrethroid	Acute toxicity
Tolfenpyrad	Pyrazole	Acute toxicity
Zeta-cypermethrin	Pyrethroid	Acute toxicity

Registered Herbicides Harmful to Bees, Butterflies and Other Pollinators					
Active Ingredient	Chemical Class	Hazard to Bees			
Glyphosate	Phosphonoglycine	Eliminates forage & habitat			
Atrazine	Triazine	Eliminates forage & habitat			
Simazine	Triazine	Eliminates forage & habitat			
Sulfallate	Dithiocarbamate	Eliminates forage & habitat			
2,4-D	Chlorophenoxy acid or ester	Eliminates forage & habitat, chronic toxicity			
Dicamba	Chlorophenoxy acid or ester	Eliminates forage & habitat			

47

Registered Fungicides Harmful to Bees, Butterflies and Other Pollinators					
Active Ingredient	Chemical Class	Hazard to Bees			
Trifloxystrobin	Strobin	Acutely toxic			
Iprodione	Dicarboximide				
Vinclozolin	Dicarboximide				
Procymidone	Heterocyclic organochlorine				
Captafol	Thiophthalimide				
Clonitralid	Molluscicide				
Pyraclostrobin	Strobin				

#### Appendix V – Sustainability Initiatives by Retailer

This chart provides background to Table 1 in the report.

"Energy and Climate Impact" refers to policies or practices that reduce energy consumption and greenhouse gas emissions. "Waste and Recycling" refers to policies or practices that promote recycling or reduce any kind of waste in the supply chain. "Seafood" refers to policies or practices that reduce overfishing, especially of endangered or threatened species." Animal Welfare" refers to policies or practices that promote the humane treatment of animals in a company supply chain, such as sourcing cage-free eggs. "Palm Oil" refers to policies or practices related to reducing use ofsourcing less palm oil, which that contributes to deforestation and negative social impacts, and/or prioritizing palm oil sourced from ethical and sustainable supply chains. "Agricultural Pesticides" refers to policies or practices that promote the reduction of agricultural pesticides in company supply chains.

Supermarket	Palm Oil	Seafood	Waste/ Recycling	Energy/ Climate Impact	Animal Welfare	Agricultural Pesticides
Ahold Delhaize	Palm Oil <sup>261</sup>	Seafood <sup>262</sup>	Food Waste <sup>263</sup>	Climate Impact <sup>264</sup>	Animal Welfare <sup>265</sup>	
Albertsons	Palm Oil <sup>266</sup>	Seafood <sup>267</sup>	Recycling <sup>268</sup>	Emissions Reductions269		
ALDI	Palm Oil <sup>270</sup>	Seafood <sup>271</sup>	Recycling <sup>272</sup>	Emissions Reductions <sup>273</sup>	Animal Welfare <sup>274</sup>	
Amazon			Recycling <sup>275</sup>	Energy Use <sup>276</sup>		
BJ's Wholesale	Palm Oil <sup>277</sup>	Seafood <sup>278</sup>	Recycling <sup>279</sup>	Emissions Reductions280		
Costco	Palm Oil <sup>281</sup>	Seafood 282	Recycling <sup>283</sup>	Energy Use <sup>284</sup>	Animal Welfare <sup>285</sup>	
CVS	Palm Oil <sup>286</sup>		Recycling <sup>287</sup>	Energy Use <sup>288</sup>		
Demoulas Super Market						
Giant Eagle		Seafood <sup>289</sup>	Recycling <sup>290</sup>	Energy Use <sup>291</sup>		
H-E-B		<u>Seafood</u> <sup>292</sup>	Recycling <sup>293</sup>	Energy Use 294	Animal Welfare <sup>295</sup>	
Hy-Vee		<u>Seafood</u> <sup>296</sup>	Recycling <sup>297</sup>	Energy Use <sup>298</sup>	Animal Welfare <sup>299</sup>	
Kroger Co.	Palm Oil <sup>300</sup>	<u>Seafood<sup>301</sup></u>	Recycling <sup>302</sup>	Energy Use 303	Animal Welfare <sup>304</sup>	
Meijer		<u>Seafood</u> <sup>305</sup>	Recycling <sup>306</sup>	Energy Use <sup>307</sup>		
Publix		<u>Seafood</u> <sup>308</sup>	Recycling 309	Energy Use <sup>310</sup>	<u>Animal Welfare<sup>311</sup></u>	
Rite Aid			Recycling <sup>312</sup>	Energy Use 313		
Smart and Final Stores					Animal Welfare <sup>314</sup>	
Supervalu		Seafood <sup>315</sup>		Reducing Emissions <sup>316</sup>	Animal Welfare <sup>317</sup>	
Target	Palm Oil <sup>318</sup>	Seafood <sup>319</sup>	Recycling <sup>320</sup>	Energy Use <sup>321</sup>	Animal Welfare <sup>322</sup>	
Trader Joe's		<u>Seafood</u> <sup>323</sup>			Animal Welfare <sup>324</sup>	
Wakefern Food Corp.			Recycling <sup>325</sup>			
Walgreens			Recycling <sup>326</sup>	Energy Use <sup>327</sup>		
Wal-Mart	Palm Oil <sup>328</sup>	<u>Seafood<sup>329</sup></u>	Recycling <sup>330</sup>	Energy Use <sup>331</sup>	<u>Animal Welfare<sup>332</sup></u>	
Wegmans		Seafood <sup>333</sup>	Recycling <sup>334</sup>	Reducing Emissions335	Animal Welfare <sup>336</sup>	
WinCo		Seafood <sup>337</sup>	Recycling <sup>338</sup>	Reducing Emissions <sup>339</sup>		
Whole Foods	Palm Oil <sup>340</sup>	Seafood <sup>341</sup>	Recycling <sup>342</sup>	Reducing Emissions <sup>343</sup>	Animal Welfare 344	Pesticides <sup>345</sup>

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57