



# Iowa Department of **REVENUE**

## 2020 Retailers Fuel Gallons Annual Report

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## Introduction

In 2006, the Iowa General Assembly enacted H.F. 2754, an act pertaining to the regulation of renewable fuels and energy and providing incentives for the installation of biofuels infrastructure and the promotion of biofuels sales. This legislation established a goal that biofuels replace 25 percent of all petroleum used in the formulation of gasoline by 2020.

To measure the State's progress toward achieving this goal, new reporting requirements for fuel retailers were established in 2007 (Iowa Code section 452A.33). The reporting requirements are administered by the Iowa Department of Revenue (the Department). In consultation with the Renewable Fuels Infrastructure Board, motor fuel retailers, and other interested parties, the Department established an annual reporting requirement by administrative rule (701 IAC 67.27). Fuel retailers filed the first annual report for sales made during calendar year 2007.

The Retailers Fuel Gallons Annual Report is due to the Department by January 31<sup>st</sup> in the following year. Despite a requirement for retailers to complete the report, the participation rate for retail locations across the state has typically been under 90 percent.

In 2015, in response to the changing patterns of biofuel sales and recent law changes, the data collected on the Retailers Fuel Gallons Annual Report was updated. The current report specifically tracks B11 or higher biodiesel blends, which were subject to a lower fuel excise tax rate beginning July 1, 2015. The ethanol blend tracking was also changed to better account for the growing E15 market. Ethanol blended gasoline comprised of 15 percent ethanol is now reported as one of two types: Registered E15 or Flex Fuel E15. Registered E15 is sold by retailers that have registered with the U.S. Environmental Protection Agency to sell E15 to consumers with cars built in 2001 or later to allow year-round sale of E15 gasoline. Flex Fuel E15 (15% to 19% ethanol) also includes gallons sold by retailers through a blender pump at any time during the year.

Along with the report redesign, the Department made report submission available online via a webform that allows retailers to electronically report their sales by station. For any retailer using the webform, the need for data entry by the Department is eliminated, which increases the accuracy and efficiency of reporting.

The 2020 report reveals the overall biofuel distribution percentage gained six tenths of a percentage from 2019. While retailers reported higher sales of Registered E15, and E20, their reported sales of all other ethanol blends declined. Lower sales of clear B1-B4 and B11-B19 fuel type were observed as compared to other clear biodiesel blends.

## Reporting Requirements

Fuel retailers were directed to complete the Department's webform to report 2020 annual fuel sales. Retailers indicating a lack of technology could report annual sales by completing and returning the paper form. Retailers with a large number of locations could securely email an electronic file with annual fuel sales by location. The Retailers Fuel Gallons Annual Report requires retailers to provide information on retail gasoline gallons sold for the following fuel types:

- Gasoline (non-ethanol blend)
- Ethanol E10 blend (10% to 14% ethanol)
- Ethanol Registered E15 blend (15% ethanol)
- Ethanol Flex Fuel E15 blend (15% to 19% ethanol)
- Ethanol E20 blend (20% to 69% ethanol)
- Ethanol E85 blend (70% to 85% ethanol)

Gallons of clear and dyed diesel sales are also required. The distinction between clear diesel and dyed diesel reflects whether the fuel is subject to State and federal fuel excise taxes. Dyed diesel fuel is not subject to fuel excise taxes and is sold for use in farm, construction, and other types of equipment that do not travel under their own power on public roads, except for short distances such as between farm fields.

For biodiesel sales, additional detailed information is required:

- Clear Biodiesel (1% to 4% biodiesel) B1-B4
- Clear Biodiesel (5% to 10% biodiesel) B5-B10
- Clear Biodiesel (11% to 19% biodiesel) B11-B19
- Clear Biodiesel (20% to 49% biodiesel) B20-B49
- Clear Biodiesel (50% to 100% biodiesel) B50-B100
- Dyed Biodiesel (1% to 4% biodiesel) D1-D4
- Dyed Biodiesel (5% to 10% biodiesel) D5-D10
- Dyed Biodiesel (11% to 19% biodiesel) D11-D19
- Dyed Biodiesel (20% to 49% biodiesel) D20-D49
- Dyed Biodiesel (50% to 100% biodiesel) D50-D100

## Statistical Summary for 2020

The Department identified 2,580 potential retail locations at which fuel may have been sold at retail during 2020. Emails with a link to the webform were sent to 458 retailers who provided email addresses on their calendar year 2019 annual reports. Postcards with directions for completing the online report were mailed to another 1,181 retailers, identified using Department of Agriculture and Land Stewardship motor fuel license information and the Department of Revenue eligible purchaser's database. Electronic files were emailed to 20 large fuel retailers with 1,240 locations, providing an option other than station-by-station webform reporting. Paper reports were mailed to 3 locations where operators indicated a lack of online access.

The Department received webform reports, paper forms, or electronic files representing 1,989 retail locations, a response rate of 77.1 percent compared to 86.1 percent in 2019. The 1,989 locations reported 2.15 billion gallons of retail fuel sales (see Table 1.)

Of the reporting 1,989 Iowa retail locations, 1,820 (91.5%) reported selling at least one type of ethanol blend and 803 (40.4%) reported selling one or more blend of clear or dyed biodiesel. Of the locations selling ethanol, 1,812 (91.1%) reported selling E10 fuel, 335 (16.8%) reported selling Registered E15, Flex Fuel E15 and/or E20 and 348 (17.5%) reported selling E85. Biofuel sales are summarized below and in Table 1.

### Gasoline Fuel Sales

During 2020, the reported amount of E10 gasoline sold equaled 1,064.5 million gallons. E85 gasoline sold equaled 14.8 million gallons, E20 gasoline sold equaled 1.1 million gallons, and E15 gasoline sold equaled 60.5 million gallons, with 98.6 percent sold through registered pumps. Combined, ethanol blended fuel represented 85.1 percent of total reported gasoline fuel sales during the year. Blends of E15 or higher comprised 4.5 percent of total gasoline sales in 2020. Of the 1,880 locations that sold gasoline, 1,820 (96.8%) sold one or more ethanol blend.

With just around 22.9 percent of locations failing to complete their Retailers Fuel Gallons Annual Report for 2020, gallons from the Department's Monthly Fuel Tax Reports were used to estimate the amount of gasoline sales underreported. The gallons presented in the Monthly Fuel Tax Reports reflect taxable fuel shipped from terminals rather than gallons sold at retail locations. Because the Monthly Fuel Tax Reports reflect fuel shipments made during the prior month, taxable gallons reported in the monthly reports covering February 2020 through January 2021 were compared with gallons reported as sold by retailers completing the 2020 annual report. During this period, fuel taxes were paid on a total of 1,480.5 million gallons of gasoline fuels. Comparatively, the 77.1 percent of retail locations that filed annual reports indicated 1,340.5 million gallons of gasoline fuels were sold, including all ethanol blends and non-ethanol gasoline. This reported amount equates to 85.1 percent of taxable gallons in 2020.

### Diesel Fuel Sales

Based on annual reports submitted to the Department, 1,352 retail locations sold clear diesel fuel, with 773(57.2%) of these locations selling clear biodiesel fuel during 2020. Additionally, 321 retail locations sold dyed diesel fuel, with 137(42.7%) of these locations selling dyed biodiesel fuel during 2020.

During 2020, the reported amount of clear B1-B10 diesel sold equaled 69.3 million gallons, B11-B19 diesel sold equaled 305.7 million gallons, and B20 or higher blend diesel sold equaled 89.1 million gallons. Combined, biodiesel blended fuel represented 71.9 percent of total reported clear diesel sales during the year. Blends of B11 or higher comprised 61.5 percent of total clear diesel sales in 2020.

The amount of clear biodiesel sold in 2020 equaled 447.0 million gallons, or 72.8 percent of total clear diesel fuel sales. Retailers reported selling 614.1 million gallons of clear diesel fuel. In comparison, the number of taxable (clear) gallons of diesel fuel shipped during 2020, as reported on the Monthly Fuel Tax Reports, equaled 763.7 million. Therefore, retailers completing annual reports for 2020 accounted for 77.1 percent of diesel fuel on which fuel taxes were paid.

Annual reports for 2020 indicated 199.8 million gallons of dyed (non-taxed) diesel fuel were sold, including 46.6 million biodiesel gallons (23.3%). Dyed diesel gallons are not captured in the Monthly Fuel Tax Reports.

Total diesel gallons reported were 813.9 million, and total biodiesel gallons were 493.7 million; therefore, biodiesel blended gallons accounted for 60.7 percent of clear and dyed diesel gallons sold by reporting retailers.

**Table 1. Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2020**

Fuel Type	Locations	Gallons Sold	Pure Petroleum/Diesel	Pure Biofuel
Gasoline (Non-Ethanol)	1,551	199,524,420	199,524,420	0
Ethanol				
E10	1,812	1,064,497,794	958,048,015	106,449,779
E15 Registered	223	59,720,289	50,762,246	8,958,043
E15 Flex Fuel	28	867,853	737,675	130,178
E20	84	1,119,224	895,379	223,845
E85	<u>348</u>	<u>14,849,580</u>	<u>3,118,412</u>	<u>11,731,169</u>
Total Ethanol	1,820	1,141,054,741	1,013,561,726	127,493,014
Total Gasoline and Ethanol	1,880	1,340,579,161	1,213,086,146	127,493,014
Ethanol Share		85.1%		
Clear Diesel (Non-Biodiesel)	920	167,101,756	167,101,756	0
Clear Biodiesel				
Clear B1-B4	62	3,343,345	3,209,946	133,399
Clear B5-B10	371	66,016,554	60,999,296	5,017,258
Clear B11-B19	639	305,720,991	262,308,610	43,412,381
Clear B20-B49	233	70,921,462	56,737,170	14,184,292
Clear B50-B100	<u>16</u>	<u>1,041,534</u>	<u>520,767</u>	<u>520,767</u>
Subtotal Clear Biodiesel	773	447,043,886	383,775,788	63,268,098
Total Clear Diesel	1,352	614,145,642	550,877,544	63,268,098
Clear Biodiesel Share		72.8%		
Dyed Diesel (Non-Biodiesel)	281	153,174,989	153,174,989	0
Dyed Biodiesel				
Dyed D1-D4	17	400,614	384,629	15,984
Dyed D5-D10	106	35,489,981	33,715,482	1,774,499
Dyed D11-D19	40	7,919,568	6,794,990	1,124,579
Dyed D20-D49	30	2,758,515	2,206,812	551,703
Dyed D50-D100	<u>9</u>	<u>47,228</u>	<u>23,614</u>	<u>23,614</u>
Subtotal Dyed Biodiesel	137	46,615,906	43,125,527	3,490,379
Total Dyed Diesel	321	199,790,895	196,300,516	3,490,379
Dyed Biodiesel Share		23.3%		
Total Biodiesel	803	493,659,792	426,901,315	66,758,477
Total Diesel and Biodiesel	1,367	813,936,537	747,178,060	66,758,477
Biodiesel Share		60.7%		
<b>Total Fuel</b>	<b>1,989</b>	<b>2,154,515,697</b>	<b>1,960,264,206</b>	<b>194,251,491</b>
<b>Pure Biofuel Share of Total Gasoline and Diesel Sales</b>				9.0%
<b>Biofuel Distribution Percentage</b>				14.5%

Source: 2020 Retailers Fuel Gallons Annual Reports

## Biofuel Distribution Percentage

The primary purpose of this report is to provide the information needed to determine the State's progress toward replacing 25 percent of petroleum-based motor fuels with biofuels by the year 2020. Table 1 provides estimates of the breakdown between petroleum or diesel and pure biofuel for each fuel type.

Based on blend details provided by a small number of biofuel retailers in 2015, the following blend assumptions were used to measure the progress of meeting the goal of biofuel replacing 25 percent of gasoline by 2020:

- E10 blend gasoline fuel gallons were multiplied by 0.10
- E15 Registered blend gasoline fuel gallons were multiplied by 0.15
- E15 Flex blend gasoline fuel gallons were multiplied by 0.15
- E20 blend gasoline fuel gallons were multiplied by 0.20
- E85 blend gasoline fuel gallons were multiplied by 0.79
- B1-B4 blend diesel fuel gallons were multiplied by 0.0399
- B5-B10 blend diesel fuel gallons were multiplied by 0.076
- B11-B19 blend diesel fuel gallons were multiplied by 0.142
- B20-B49 blend diesel fuel gallons were multiplied by 0.20
- B50-B100 blend gallons were multiplied by 0.50
- D1-D4 blend diesel fuel gallons were multiplied by 0.0399
- D5-D10 blend diesel fuel gallons were multiplied by 0.05
- D11-D19 blend diesel fuel gallons were multiplied by 0.142
- D20-D49 blend diesel fuel gallons were multiplied by 0.20
- D50-D100 blend gallons were multiplied by 0.50

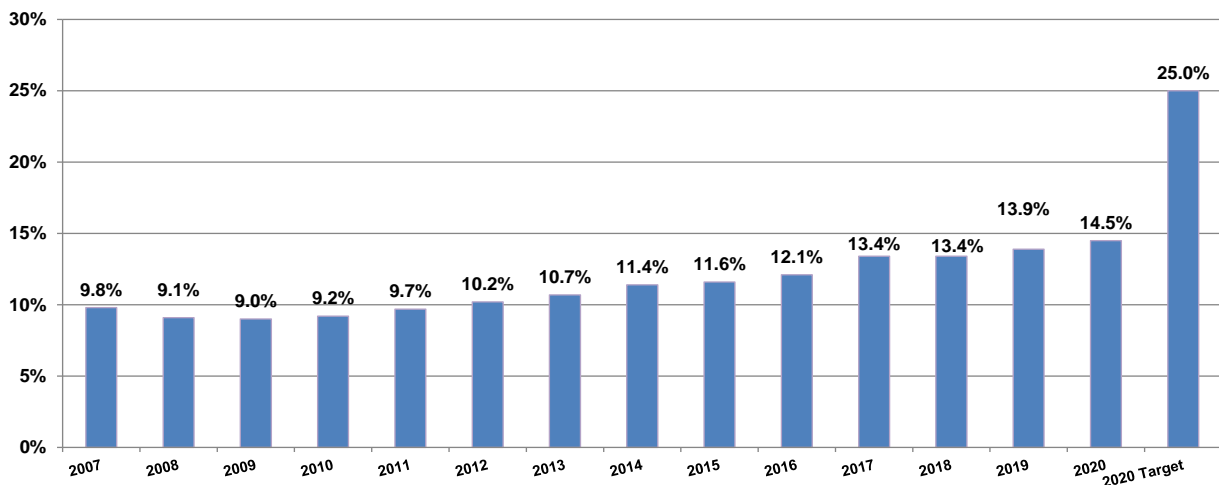
These calculations indicate that in 2020, pure ethanol comprised 9.5 percent of the volume of total gasoline and ethanol fuel sales. The aggregate ethanol gallonage, which is the number of pure ethanol gallons sold by retailers in 2020, was 127.5 million gallons. Pure biodiesel comprised 8.2 percent of total diesel and biodiesel sales. The aggregate biodiesel gallonage, which is the number of pure biodiesel gallons sold by retailers in 2020, was 66.8 million gallons. Pure biodiesel sold in clear diesel comprised 10.3 percent of gallons sold while pure biodiesel sold in dyed diesel comprised only 1.7 percent of gallons sold. Together, pure ethanol and pure biodiesel comprised 9.0 percent of all fuel sales reported by retailers in Iowa. However, the formula specified in Iowa Code section 452.31(8) for the biofuel distribution percentage used to determine progress toward meeting the 25 percent biofuels goal does not include diesel fuel in its denominator. The formula is as follows:

$$\text{Biofuel Distribution Percentage} = \frac{\text{Pure Ethanol Gallons} + \text{Pure Biodiesel Gallons}}{\text{Total Gasoline Gallons}}$$

Using this formula, biofuels accounted for 14.5 percent of Iowa retail motor fuel sales in 2020. This level is an increase of six tenths of a percentage point from the percentage calculated for 2019 (see Appendix).

Figure1 presents the biofuel distribution percentage calculated for calendar years 2007 through 2020. Between 2010 and 2013, the State percentage increased 0.5 percentage points each year, solely as a result of higher biodiesel usage. The 0.7 percentage point jump in 2014 reflected a change in the octane level of gasoline piped into Iowa, which occurred in late 2013; this resulted in higher ethanol sales throughout the following calendar year. The 0.5 percentage point gain in 2016 reflected both higher ethanol and biodiesel sales. In 2017, retailers reported the largest increase in state-wide biofuel usage, mostly reflecting higher sales of E15, E85, and B20. Higher gallons of pure ethanol accounted for 30 percent of the growth with gains in pure biodiesel gallons accounting for the other 70 percent.

**Figure1. Statewide Biofuel Distribution Percentage, 2007-2020 Calendar Years**



Source: Retailers Fuel Gallons Annual Reports, 2007-2020

Although the biofuel distribution percentage improved only 0.6 percentage points between 2019 and 2020, Table 2 indicates E10 gallons decreased by 219.8 million gallons. The changes were not uniform across ethanol and biodiesel blends. The ethanol blend that recorded growth was registered E15, with reported sales 12.2 million gallons (25.9%) higher than 2019. Similarly, E20 showed upward growth of 5.9 percent. The gains in pure clear biodiesel were experienced in B50-B100 and B11-B19. For dyed biodiesel, significant gains were observed in D20-D49 and D50-D100 blends.



**Table 2. Change in Biofuel and Pure Biofuel Sales Between 2019 and 2020**

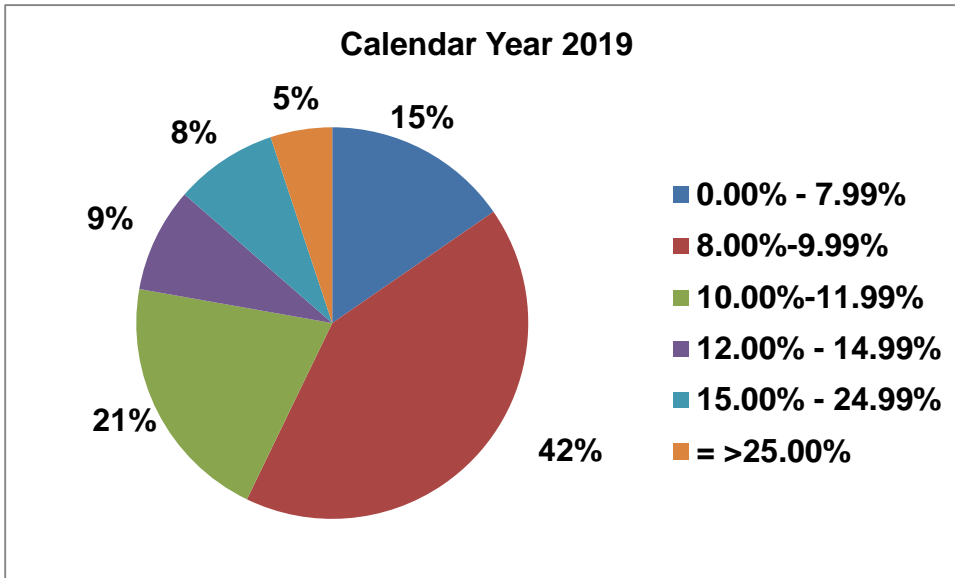
<b>Fuel Type</b>	<b>Change in Biofuel Gallons Sold</b>	<b>Percent Change in Biofuel Gallons</b>	<b>Change in Pure Biofuel Gallons Sold</b>	<b>Percent Change in Pure Biofuel Gallons</b>
<b>Ethanol</b>				
E10	-219,831,263	-17.1%	-21,983,126	-17.1%
E15 Registered	12,281,173	25.9%	1,842,176	25.9%
E15 Flex	-652,332	-42.9%	-97,850	-42.9%
E20	62,646	5.9%	12,529	5.9%
E85	-4,179,570	-22.0%	-3,301,860	-22.0%
<b>Total Ethanol</b>	<b>-212,319,346</b>	<b>-15.6%</b>	<b>-23,528,131</b>	<b>-15.6%</b>
<b>Clear Biodiesel</b>				
Clear B1-B4	-3,629,239	-52.1%	-144,807	-52.1%
Clear B5-B10	-3,522,152	-5.1%	-267,684	-5.1%
Clear B11-B19	14,487,866	5.0%	2,057,277	5.0%
Clear B20-B49	-5,996,636	-7.8%	-1,199,327	-7.8%
Clear B50-B100	510,155	96.0%	255,077	96.0%
<b>Total Clear Biodiesel</b>	<b>1,849,994</b>	<b>0.4%</b>	<b>700,537</b>	<b>1.1%</b>
<b>Dyed Biodiesel</b>				
Dyed D1-D4	-294,580	-42.4%	-11,754	-42.4%
Dyed D5-D10	-5,223,349	-12.8%	-261,167	-12.8%
Dyed D11-D19	893,728	12.7%	126,909	12.7%
Dyed D20-D49	1,304,936	89.8%	260,987	89.8%
Dyed D50-D100	5,422	13.0%	2,711	13.0%
<b>Total Dyed Biodiesel</b>	<b>-3,313,843</b>	<b>-6.6%</b>	<b>117,686</b>	<b>3.5%</b>
<b>Total Change</b>	<b>-213,783,195</b>	<b>-11.6%</b>	<b>-22,709,908</b>	<b>-10.5%</b>

Source: 2020 and 2019 Retailers Fuel Gallons Annual Reports

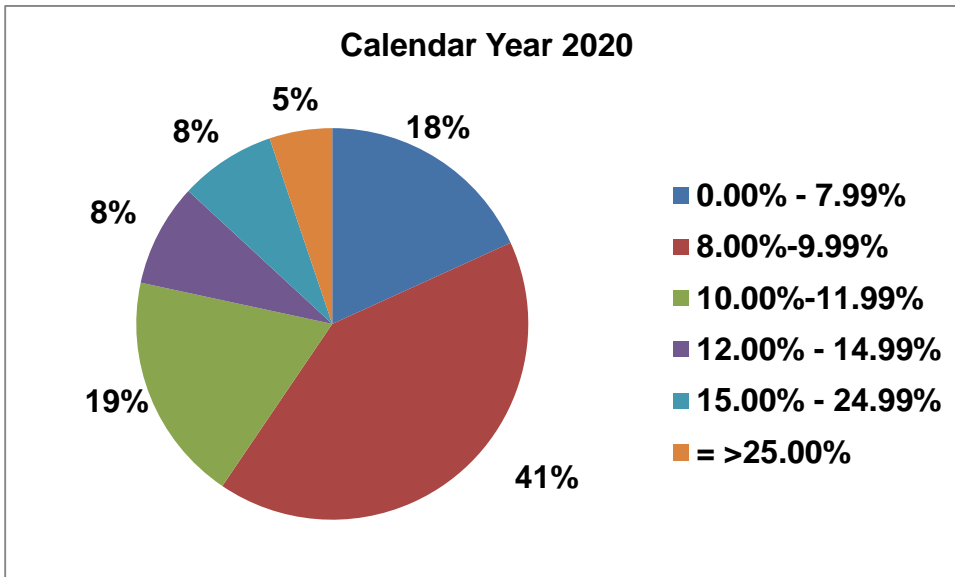
Although the 25 percent goal is for the state as a whole, it is instructive to consider that same measure at the retailer and county level. Figure 2 illustrates the breakdown of retail locations by biofuel distribution percentage, calculated using the sales reported by each retail location for which annual reports were filed in 2019 or 2020. The data includes only the retail locations that reported gasoline or ethanol sales in the respective calendar year, excluding those with only diesel sales reported. However, as noted above, the calculation of the biofuel distribution percentage includes any pure biodiesel reported at those locations.

The share of stations reporting a biofuel distribution percentage equal to or greater than 25 percent remained unchanged in 2020 at 5 percent. The percentage of retailers reporting from 0 percent to 7.99 percent increase from 15.0 percent in 2019 to 18.0 percent in 2020. The share of retailers in the 8.0 to 9.99 percent range declined 1 percentage points from 42.0 percent in 2019 to 41.0 percent in 2020. The share with a biofuel distribution percentage between 10.0 and 11.99 percent decreased by two percentage point from 21.0 percent in 2019 to 19.0 percent in 2020. The share of retailers with a biofuel distribution percentage between 12.0 and 14.99 percent slipped from 9.0 to 8.0 percent and the share between 15.0 and 24.99 percent remained unchanged from 2019.

**Figure 2: Breakdown of Retail Locations by Reported Biofuel Distribution Percentage**



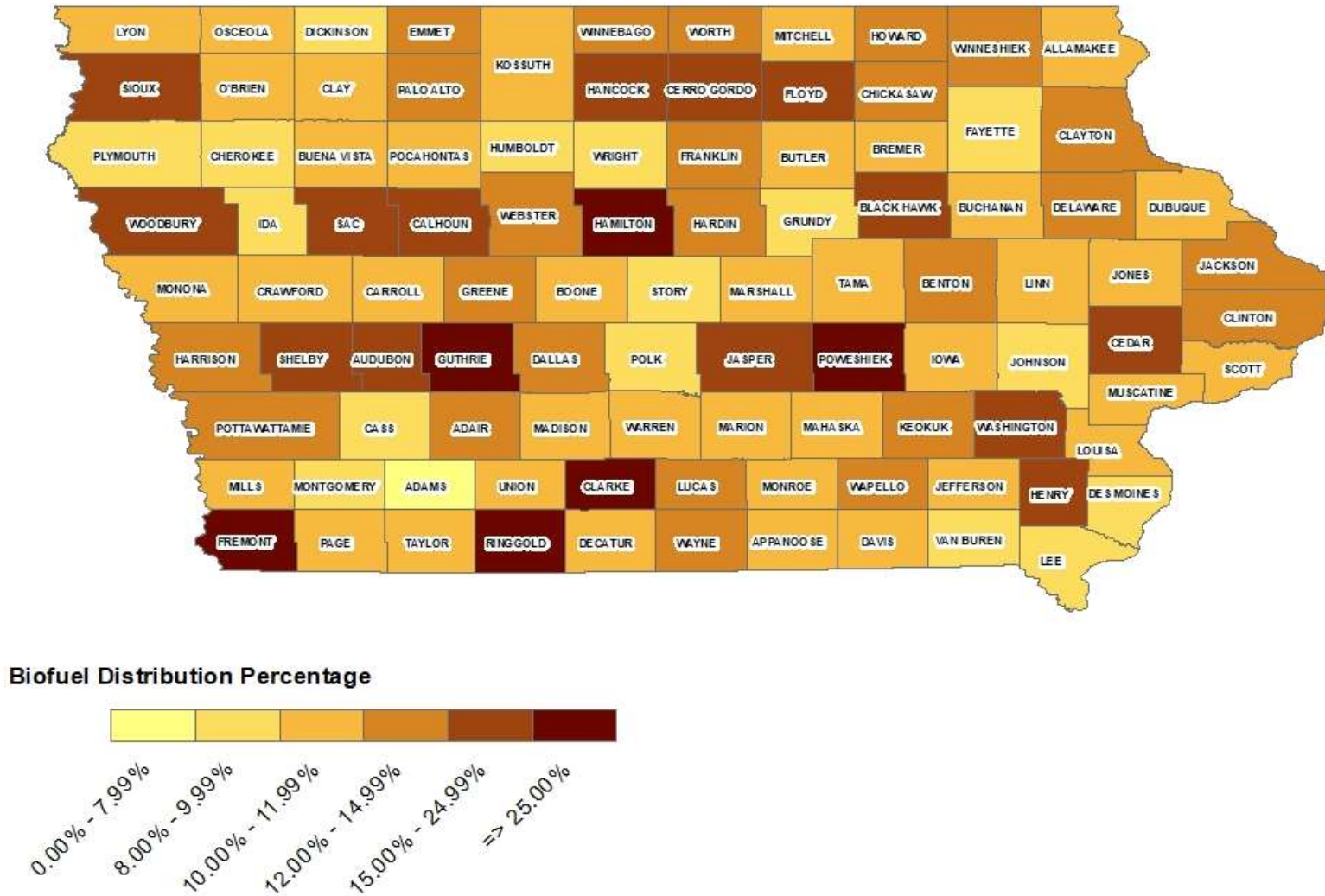
Source: 2019 Retailers Fuel Gallons Annual Reports



Source: 2020 Retailers Fuel Gallons Annual Reports

To further illustrate the variation in sales of biofuels among Iowa retailers, Figure 3 maps the biofuel distribution percentage calculated by county. These percentages are based on the total sales reported by retailers within each county who remitted the 2020 Retailers Fuel Gallons Annual Report. All counties had a calculated biofuel distribution percentage of 8.9 percent or higher. Six counties (Pottawattamie, Clarke, Fremont, Guthrie, Hamilton and Poweshiek) exceeded the 25 percent; fourteen counties had pure biofuel sales comprising between 15.0 and 24.99 percent of total gasoline sales. Twenty-four counties fell into the 12.0 to 14.99 percent category. Aggregated retail sales in sixteen counties fell in the 8.0 to 9.99 percent category, and thirty-eight fell into the 10.0 to 11.99 percent category. Table 3 provides the total gallons of non-ethanol gasoline, ethanol, clear and dyed non-biodiesel, clear and dyed biodiesel, and pure biofuel gallons for all counties with at least five retailers reporting sales to the Department.

Figure 3. Biofuel Distribution Percentage by County for 2020



Source: 2020 Retailers Fuel Gallons Annual Reports

**Table 3. Calendar Year 2020 Total Gallons by County**

County	Number of Retailers Reporting	Gasoline Sales	Ethanol Sales	Clear and Dyed Diesel Sales	Clear and Dyed Biodiesel Sales	Pure Biofuel Sales	Biofuel Distribution Percentage
Adair	11	1,244,749	5,688,645	1,535,290	1,638,904	854,685	12.33%
Allamakee	16	948,629	4,927,601	2,090,054	1,033,233	688,357	11.71%
Appanoose	9	622,179	4,292,707	2,511,573	486,187	570,132	11.60%
Audubon	6	216,937	2,069,131	1,954,005	1,099,624	397,181	17.37%
Benton	24	1,304,575	6,379,548	4,298,919	1,763,724	1,145,213	14.90%
Black Hawk	62	8,078,572	44,631,343	4,273,224	20,270,961	8,206,938	15.57%
Boone	14	982,626	6,984,086	1,795,127	2,547,797	860,053	10.80%
Bremer	17	2,003,988	8,776,444	1,455,228	1,778,414	1,262,489	11.71%
Buchanan	13	1,153,339	6,247,188	1,375,353	1,038,766	831,841	11.24%
Buena Vista	24	988,329	6,994,308	3,330,527	1,480,025	951,586	11.92%
Butler	11	941,159	4,873,912	1,446,369	845,222	650,808	11.19%
Calhoun	14	320,836	3,337,306	440,885	4,434,481	734,451	20.08%
Carroll	25	1,410,771	8,070,044	11,124,128	637,437	980,060	10.34%
Cass	15	744,675	5,744,374	4,432,374	482,342	630,007	9.71%
Cedar	14	1,541,478	10,573,151	5,749,327	7,735,486	2,290,924	18.91%
Cerro Gordo	30	4,224,483	22,055,998	6,930,324	13,761,212	4,629,672	17.62%
Cherokee	15	665,847	4,031,730	3,797,438	409,183	462,404	9.84%
Chickasaw	12	1,274,976	5,409,501	5,175,421	3,737,740	977,233	14.62%
Clarke	8	1,129,352	6,330,592	101,427	8,648,861	1,882,324	25.23%
Clay	17	827,383	5,078,461	1,059,809	722,963	610,848	10.34%
Clayton	21	1,479,968	6,184,658	2,836,760	1,439,159	986,861	12.88%
Clinton	30	3,219,904	17,625,909	4,341,713	5,133,093	2,712,211	13.01%
Crawford	13	660,554	4,163,210	2,274,638	1,184,451	513,608	10.65%
Dallas	41	5,441,218	31,105,799	7,538,201	7,651,638	4,631,265	12.67%
Davis	5	211,828	1,629,981	824,133	449,426	186,117	10.11%
Decatur	5	375,314	2,287,871	273,038	461,879	305,095	11.46%
Delaware	13	1,031,941	5,035,342	1,371,233	1,142,670	742,238	12.23%
Des Moines	17	1,930,128	12,730,245	552,756	185,998	1,426,667	9.73%
Dickinson	22	2,180,042	7,759,788	1,286,591	503,387	913,112	9.19%
Dubuque	45	8,354,521	45,340,172	7,336,881	17,032,014	5,998,155	11.17%
Emmet	7	319,018	2,858,893	94,663	493,032	406,305	12.79%
Fayette	16	731,264	6,401,240	426,933	371,724	693,548	9.72%
Floyd	13	1,854,639	5,125,293	2,488,370	8,935,895	1,732,272	24.82%
Franklin	11	457,666	4,444,711	2,935,871	1,063,218	694,054	14.16%
Fremont	6	341,377	4,556,546	946,065	13,926,447	2,486,487	50.77%
Greene	12	342,558	3,966,820	502,890	2,321,418	585,801	13.59%
Grundy	13	654,695	4,609,734	4,283,241	124,718	489,793	9.30%
Guthrie	11	510,532	3,340,021	802,738	6,692,920	1,271,928	33.03%
Hamilton	15	2,044,129	6,139,063	2,804,741	10,952,072	2,323,029	28.39%
Hancock	7	344,438	2,860,362	169,583	1,409,933	547,229	17.08%
Hardin	25	1,462,869	10,784,883	6,329,795	2,218,664	1,647,833	13.45%
Harrison	11	556,946	4,686,596	2,251,786	2,288,212	684,695	13.06%
Henry	18	1,114,221	16,090,086	2,914,317	13,666,475	3,594,194	20.89%
Howard	12	730,537	3,770,216	1,883,978	1,383,783	560,736	12.46%
Humboldt	11	678,865	3,844,555	3,542,200	324,915	445,721	9.85%
Ia	9	401,697	2,631,116	1,835,368	31,913	301,551	9.94%
Iowa	33	2,563,741	11,532,490	7,166,549	1,909,580	1,498,387	10.63%
Jackson	17	1,272,388	7,640,509	894,843	2,201,313	1,210,789	13.58%
Jasper	24	4,005,343	13,248,538	2,046,241	17,756,986	3,747,334	21.72%

**Table 3. Calendar Year 2020 Total Gallons by County (continued)**

County	Number of Retailers Reporting	Gasoline Sales	Ethanol Sales	Clear and Dyed Diesel Sales	Clear and Dyed Biodiesel Sales	Pure Biofuel Sales	Biofuel Distribution Percentage
Jefferson	14	836,981	4,442,814	1,443,302	1,082,087	610,755	11.57%
Johnson	52	9,276,449	36,427,857	4,428,953	3,150,452	4,321,347	9.46%
Jones	11	951,875	6,404,713	1,841,954	1,460,877	848,299	11.53%
Keokuk	10	516,622	3,962,091	1,535,948	909,341	565,939	12.64%
Kossuth	12	576,506	4,651,778	2,695,950	336,693	540,228	10.33%
Lee	19	1,564,524	9,608,748	1,618,211	479,079	1,024,024	9.16%
Linn	91	12,763,911	71,312,015	10,386,785	11,967,596	10,042,449	11.94%
Louisa	8	445,052	3,189,031	392,665	463,217	402,441	11.07%
Lucas	7	453,305	2,641,120	695,597	1,946,060	423,170	13.68%
Lyon	13	715,682	4,249,705	3,816,666	583,339	505,129	10.17%
Madison	13	795,786	6,731,336	6,728,104	1,006,711	851,810	11.32%
Mahaska	16	1,391,003	9,329,317	1,855,202	1,917,617	1,217,716	11.36%
Marion	19	1,916,520	12,405,178	5,051,383	1,392,285	1,562,847	10.91%
Marshall	25	2,759,354	10,944,518	2,078,826	2,415,980	1,481,018	10.81%
Mills	10	688,891	4,688,104	2,531,018	639,866	606,592	11.28%
Mitchell	9	617,709	3,510,560	3,002,662	451,217	464,508	11.25%
Monona	10	466,581	4,008,186	1,578,150	373,538	514,321	11.49%
Monroe	5	379,033	3,174,746	42,964	409,359	390,829	11.00%
Montgomery	8	568,038	3,298,231	4,135,000	72,588	375,442	9.36%
Muscatine	16	1,535,071	11,755,881	447,232	1,289,268	1,594,067	11.99%
O'Brien	21	776,960	5,751,864	4,783,053	340,073	675,686	10.35%
Osceola	8	191,190	1,355,276	267,502	660,568	173,622	11.23%
Other	8	372,277	2,754,038	824,559	775,074	373,250	11.94%
Page	7	398,306	4,850,265	2,160,908	525,932	630,637	12.02%
Palo Alto	6	319,758	2,818,420	1,098,535	87,698	294,295	9.38%
Plymouth	16	2,280,440	9,162,506	14,674,889	1,360,141	1,181,393	10.32%
Pocahontas	6	474,384	3,150,460	8,685,122	124,718	350,774	9.68%
Polk	198	30,949,625	163,247,695	22,692,805	55,926,584	26,166,863	13.47%
Pottawattamie	52	8,273,232	44,065,836	10,311,108	58,948,417	13,465,944	25.73%
Poweshiek	24	1,924,623	12,751,269	5,909,079	35,403,680	6,890,264	46.95%
Ringgold	7	271,215	1,816,642	706,637	1,489,004	346,010	16.57%
Sac	15	532,437	3,950,784	1,271,086	655,520	478,731	10.68%
Scott	91	9,912,938	78,497,566	2,572,829	52,410,915	16,324,278	18.46%
Shelby	14	452,203	4,128,510	3,709,285	3,485,909	855,136	18.67%
Sioux	22	1,916,338	8,325,319	9,592,157	434,824	925,328	9.03%
Story	43	4,812,421	30,946,502	1,897,972	5,019,930	4,198,641	11.74%
Tama	19	981,189	6,246,744	3,153,144	513,996	740,573	10.25%
Union	13	708,233	4,775,881	1,030,814	900,365	644,553	11.75%
Van Buren	8	504,816	2,080,285	1,040,247	213,887	230,057	8.90%
Wapello	24	2,134,399	13,343,632	393,969	3,608,416	1,946,468	12.58%
Warren	30	2,879,005	18,516,658	647,905	2,210,845	2,308,917	10.79%
Washington	17	1,059,560	7,361,218	3,080,915	5,404,818	1,278,648	15.18%
Wayne	7	243,959	2,060,151	367,789	1,658,919	313,259	13.60%
Webster	30	1,633,290	15,362,406	1,968,055	3,793,012	2,249,745	13.24%
Winnebago	14	328,706	3,516,897	1,992,932	378,706	477,992	12.43%
Winneshiek	17	1,534,310	7,878,708	7,018,509	1,972,882	1,148,533	12.20%
Woodbury	37	7,455,512	33,198,987	9,783,254	24,774,864	7,383,149	18.16%
Worth	9	375,486	3,032,438	1,406,312	145,253	413,476	12.13%
Wright	18	711,491	4,481,139	3,095,884	278,176	488,118	9.40%

Source: 2020 Retailers Fuel Gallons Annual Reports

Note: Other includes Adams and Taylor Counties where less than five retailers reported sales.

**Appendix**  
**Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2019**

Fuel Type	Locations	Gallons Sold	Pure Petroleum/Diesel	Pure Biofuel
Gasoline (Non-Ethanol)	1,633	211,549,040	211,549,040	0
<b>Ethanol</b>				
E10	1,958	1,284,329,057	1,155,896,151	128,432,906
E15 Registered	203	47,439,116	40,323,249	7,115,867
E15 Flex Fuel	41	1,520,185	1,292,157	228,028
E20	89	1,056,578	845,262	211,316
E85	350	19,029,150	3,996,122	15,033,029
<b>Total Ethanol</b>	<b>1,968</b>	<b>1,353,374,086</b>	<b>1,202,352,941</b>	<b>151,021,145</b>
<b>Total Gasoline and Ethanol</b>	<b>2,027</b>	<b>1,564,923,126</b>	<b>1,413,901,981</b>	<b>151,021,145</b>
<b>Ethanol Share</b>	<b>97.1%</b>	<b>86.5%</b>		<b>9.7%</b>
Clear Diesel (Non-Biodiesel)	998	191,671,366	191,671,366	0
<b>Clear Biodiesel</b>				
Clear B1-B4	66	6,972,584	6,694,378	278,206
Clear B5-B10	309	69,538,706	64,253,764	5,284,942
Clear B11-B19	610	291,233,125	249,878,021	41,355,104
Clear B20-B49	214	76,918,098	61,534,478	15,383,620
Clear B50-B100	13	531,379	265,690	265,690
<b>Subtotal Clear Biodiesel</b>	<b>784</b>	<b>445,193,892</b>	<b>382,626,331</b>	<b>62,567,561</b>
<b>Total Clear Diesel</b>	<b>1,428</b>	<b>636,865,258</b>	<b>574,297,697</b>	<b>62,567,561</b>
<b>Clear Biodiesel Share</b>	<b>54.9%</b>	<b>69.9%</b>		<b>9.8%</b>
Dyed Diesel (Non-Biodiesel)	298	150,789,637	150,789,637	0
<b>Dyed Biodiesel</b>				
Dyed D1-D4	29	695,194	667,456	27,738
Dyed D5-D10	96	40,713,330	38,677,664	2,035,667
Dyed D11-D19	38	7,025,840	6,028,171	997,669
Dyed D20-D49	25	1,453,579	1,162,863	290,716
Dyed D50-D100	10	41,806	20,903	20,903
<b>Subtotal Dyed Biodiesel</b>	<b>135</b>	<b>49,929,749</b>	<b>46,557,056</b>	<b>3,372,693</b>
<b>Total Dyed Diesel</b>	<b>336</b>	<b>200,719,386</b>	<b>197,346,693</b>	<b>3,372,693</b>
<b>Dyed Biodiesel Share</b>	<b>41.6%</b>	<b>24.9%</b>		<b>1.7%</b>
<b>Total Biodiesel</b>	<b>808</b>	<b>495,123,641</b>	<b>429,183,388</b>	<b>65,940,253</b>
<b>Total Diesel and Biodiesel</b>	<b>1,443</b>	<b>837,584,644</b>	<b>771,644,391</b>	<b>65,940,253</b>
<b>Biodiesel Share</b>	<b>56.0%</b>	<b>59.1%</b>		<b>7.9%</b>
<b>Total Fuel</b>	<b>2,120</b>	<b>2,402,507,770</b>	<b>2,185,546,372</b>	<b>216,961,398</b>
<b>Pure Biofuel Share of Total Gasoline and Diesel Sales</b>				<b>9.0%</b>
<b>Biofuel Distribution Percentage</b>				<b>13.9%</b>

Source: 2019 Retailers Fuel Gallons Annual Reports