



2022 Retailers Fuel Gallons Annual Report (Revised)

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Introduction

Iowa motor fuel retailers are businesses that offer a range of fuel options, including gasoline, diesel, ethanol, and biodiesel. Iowa Code section 452A.33 requires all Iowa fuel retailers to report motor fuel and diesel gallons to the Iowa Department of Revenue and for the Department to prepare and submit an annual report of fuel gallons to the Iowa Governor and Legislature. Since 2007, when this law became effective, the Department has published the Retailers Fuel Gallons Annual Report for each calendar year. The annual report is based on retailers' reports of gallons that are due to the Department by January 31st in the following year. The present report concerns fuel gallons sold in Iowa in 2022. Starting in 2023, Retail dealers who fail to file the report by January 31st are subject to a \$100 penalty for each retail motor fuel site from which the retail dealer sells and dispenses gasoline or diesel fuel.

Over the years, the Retailers Fuel Gallons Annual Report has been updated to reflect changes in law and trends in biofuel sales. The current report includes data on B11 or higher biodiesel blends, which became subject to a lower fuel excise tax rate starting July 1, 2015. Additionally, the tracking of ethanol blend fuel was updated to better capture the expanding E15 market. Ethanol blended gasoline with 15 percent ethanol is now classified as either Registered E15 or Flex Fuel E15. Registered E15 is sold by retailers who have registered with the U.S. Environmental Protection Agency to sell E15 to consumers with vehicles manufactured in 2001 or later, enabling year-round sale of E15 gasoline. Flex Fuel E15, which includes gallons sold by retailers through a blender pump at any time during the year, also encompasses ethanol blends ranging from 15 percent to 19 percent.

Reporting Requirements

Fuel retailers were instructed to report their 2022 annual fuel sales to the Department via a webform. Retailers with a significant number of locations were able to upload an electronic file with annual fuel sales by location within the secure webform. Retailers who lacked the necessary technology could submit their annual sales by completing and returning a paper form. The Retailers Fuel Gallons Annual Report mandates that retailers provide information on the retail gasoline gallons sold for the following types of fuel:

- 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)

In addition to gasoline sales, the Retailers Fuel Gallons Annual Report also requires retailers to provide information on the gallons of clear and dyed diesel sold. The differentiation between clear diesel and dyed diesel is based on whether the fuel is subject to State and Federal fuel excise taxes. Dyed diesel fuel is not subject to these taxes and is primarily sold for use in farm, construction, and other types of equipment that do not travel on public roads under their own power, except for short distances such as between farm fields.

For biodiesel sales, information is collected for the following fuel types:

- 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 29% biodiesel) B20-B29
- Clear Biodiesel (30% to 49% biodiesel) B30-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 29% biodiesel) D20-D29
- Dyed Biodiesel (30% to 49% biodiesel) D30-D49
- Dyed Biodiesel (50% to 100% biodiesel) D50-D100

Statistical Summary for 2022

The Department has identified 2,533 retail locations that potentially sold fuel at retail during 2022. To provide instructions for completing the online report, postcards were mailed to 1,056 retailers at their main business address. The Department identified these retailers using information from the Department of Agriculture and Land Stewardship's motor fuel license database and the Department of Revenue's eligible purchaser's database.

Out of these potential locations, the Department received webform reports, paper forms, or electronic files from 1,804 retail locations, representing a response rate of 71 percent, which is higher than the 57.2 percent in 2021. These 1,804 locations reported a total of 2.1 billion gallons of retail fuel sales, as shown in Table 1.

Gasoline Fuel Sales

Amongst the 1,804 retail locations that sold gasoline in 2022, 1,682 of them (or 95.1%) sold at least one ethanol blend. E10 gasoline was the most frequently sold ethanol blend, with a reported total of 972 million gallons sold. Additionally, E15 gasoline sales were reported to be 121 million gallons, while E20 gasoline sales were 1 million gallon, and E85 gasoline sales totaled 19.6 million gallons. In total, ethanol blends of E15 or higher constituted 9.5 percent of all gasoline sales in 2022.

During this period, fuel taxes were paid on a total of 1,704 million gallons of gasoline fuels. Comparatively, the 71 percent of retail locations that filed annual reports indicated 1,257 million gallons of gasoline fuels were sold, including all ethanol blends and non-ethanol gasoline. This reported amount equates to 87.3 percent of taxable gallons in 2022.

Diesel Fuel Sales

According to the annual reports submitted to the Department, a total of 1,291 retail locations sold clear diesel fuel in 2022. Out of these locations, 713 (or 55%) sold clear biodiesel fuel as well. In addition, 321 retail locations sold dyed diesel fuel during this period, and 137 (or 43%) of these locations also sold dyed biodiesel fuel.

In 2022, the reported amount of clear B1-B10 diesel sold equaled 96 million gallons, B11-B19 diesel sold equaled 251 million gallons, and B20 or higher blend diesel sold equaled 108 million gallons. The amount of clear biodiesel sold in 2022 equaled 454 million gallons, or 69 percent of total clear diesel fuel sales. Retailers reported selling 661 million gallons of clear diesel fuel. In comparison, the number of taxable (clear) gallons of diesel fuel shipped during 2022, as reported on the Monthly Fuel Tax Reports, equaled 818.9 million. Therefore, retailers completing annual reports for 2022 accounted for 71 percent of diesel fuel on which fuel taxes were paid.

Annual reports for 2022 indicated 201 million gallons of dyed (non-taxed) diesel fuel were sold, including 35 million biodiesel gallons (18%) Dyed diesel gallons are not captured in the Monthly Fuel Tax Reports. Total diesel gallons reported were 861 million, and total biodiesel gallons 490 million; therefore, biodiesel blended gallons accounted for 57 percent of clear and dyed diesel gallons sold by reporting retailers.

Table 1. Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2022

Table 1: Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2022

Fuel Type	Locations	Gallons Sold	Pure Petroleum/Diesel	Pure Biofuel
Gasoline (Non-Ethanol)	1,455	162,582,669	162,582,669	0
Ethanol				
E10	1,670	972,033,145	874,829,843	97,203,305
E15 Registered	291	119,112,349	101,245,503	17,866,846
E15 Flex Fuel	38	2,017,899	1,715,213	302,686
E20	85	1,186,265	949,009	237,256
E85	307	19,618,971	4,119,984	15,498,987
Total Ethanol	1,682	1,113,968,629	982,859,552	131,109,080
Total Gasoline and Ethanol	1,768	1,276,551,298	1,145,442,221	131,109,080
Ethanol Share	95.1%	87.26%		
Gasoline Share	82.3%			
Clear Diesel (Non-Biodiesel)	763	206,151,043	206,151,043	0
Clear Biodiesel				
Clear B1-B4	72	6,542,848	6,281,789	261,059
Clear B5-B10	407	89,001,882	82,237,748	6,764,137
Clear B11-B19	578	251,336,922	215,647,086	35,689,836
Clear B20-B29	476	107,038,042	85,630,430	21,407,612
Clear B30-B49	5	270,414	189,291	81,124
Clear B50-B100	21	252,056	126,029	126,029
Subtotal Clear Biodiesel	713	454,442,164	390,112,373	64,329,797
Total Clear Diesel	1,291	660,593,207	596,263,416	64,329,797
Clear Biodiesel Share	55.2%	68.79%		
Dyed Diesel (Non-Biodiesel)	285	165,419,323	165,419,323	0
Dyed Biodiesel				
Dyed D1-D4	23	1,807,319	1,735,209	72,110
Dyed D5-D10	86	24,258,796	23,045,858	1,212,938
Dyed D11-D19	56	8,050,006	6,906,907	1,143,099
Dyed D20-D29	31	809,589	647,669	161,920
Dyed D30-D49	3	12,328	8,630	3,698
Dyed D50-D100	8	311,188	155,595	155,595
Subtotal Dyed Biodiesel	137	35,249,226	32,499,868	2,749,360
Total Dyed Diesel	321	200,668,549	197,919,191	2,749,360
Dyed Biodiesel Share	42.7%	17.57%		
Total Biodiesel	737	489,691,390	422,612,241	67,079,157
Total Diesel and Biodiesel	1,303	861,261,756	794,182,607	67,079,157
Biodiesel Share		56.86%		
Total Fuel	1,804	2,137,813,054	1,939,624,828	198,188,237
Pure Biofuel Share of Total Gasoline and Diesel Sales				9.3%
Biofuel Distribution Percentage				15.53%

Source: 2022 Retailers Fuel Gallons Annual Reports

Biofuel Distribution Percentage

The following assumptions concerning blends were used to estimate the total amount of biofuel sold in Iowa 2022:

- 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-B29 blend diesel fuel gallons were multiplied by 0.20
- B30-B49 blend diesel fuel gallons were multiplied by 0.30
- 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-D29 blend diesel fuel gallons were multiplied by 0.20
- D30-D49 blend diesel fuel gallons were multiplied by 0.30
- D50-D100 blend gallons were multiplied by 0.50

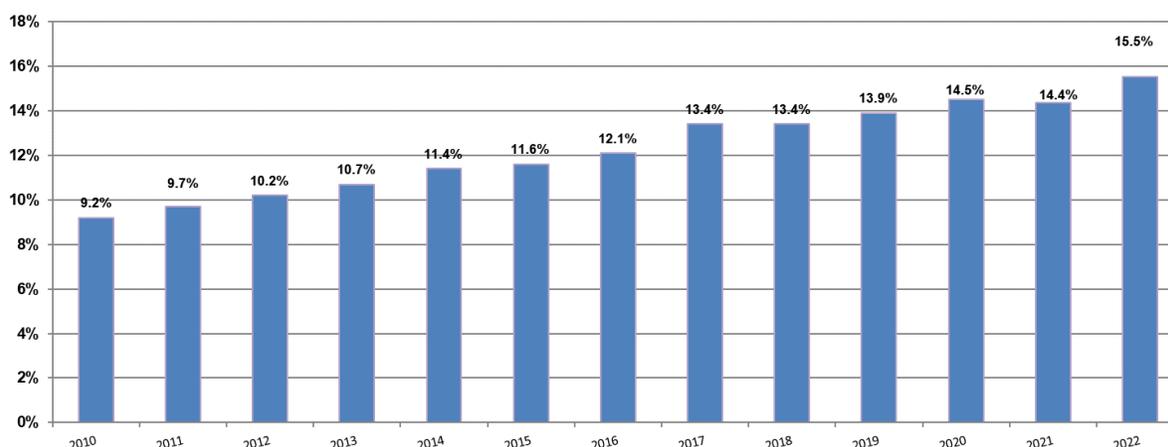
These calculations indicate that in 2022, pure ethanol comprised 10 percent of the volume of total gasoline and ethanol fuel sales. The aggregate ethanol gallonage, which is the number of pure ethanol gallons sold by retailers in 2022, was 1.3 billion gallons. Pure biodiesel comprised 7 percent of total diesel and biodiesel sales. The aggregate biodiesel gallonage, which is the number of pure biodiesel gallons sold by retailers in 2022, was 67 million gallons. Pure biodiesel sold in clear diesel comprised 9.7 percent of gallons sold while pure biodiesel sold in dyed diesel comprised only 1.4 percent of gallons sold. Together, pure ethanol and pure biodiesel comprised 9.3 percent of all fuel sales reported by retailers in Iowa.

However, note that the formula specified in Iowa Code section 452.31(8) to determine a biofuel distribution percentage 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 15.53 percent of Iowa retail motor fuel sales in 2022. This level is an increase compared to the percentage calculated for 2021 (see Appendix).

Figure1. Statewide Biofuel Distribution Percentage, 2010-2022 Calendar Years



Source: Retailers Fuel Gallons Annual Reports, 2010-2022

Table 2: Comparison of Fuel and PureBiofuel Gallons sold in 2022 Vs 2021

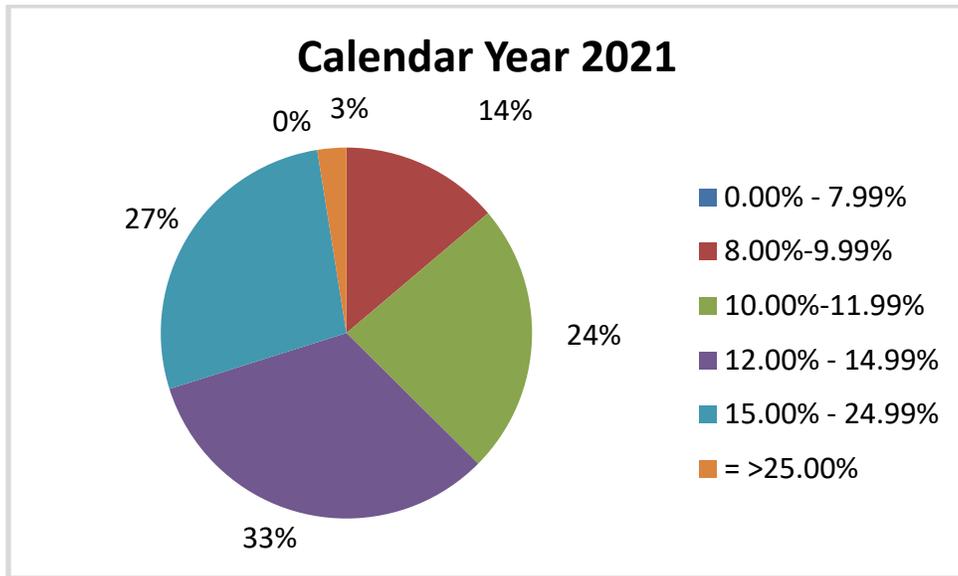
Fuel Type	Change in Biofuel Gallons Sold	Percent Change in Biofuel Gallons	Change in Pure Biofuel Gallons Sold	Percent Change in Pure Biofuel Gallons
Ethanol				
E10	-154,502,886	-13.7%	-15,450,309	-13.7%
E15 Registered	33,478,143	39.1%	5,021,711	39.1%
E15 Flex	714,852	54.9%	107,228	54.9%
E20	252,412	27.0%	50,488	27.0%
E85	359,122	1.9%	283,705	1.9%
Total Ethanol	-119,698,357	-9.7%	-9,987,177	-7.1%
Clear Biodiesel				
Clear B1-B4	1,472,288	29.0%	58,742	29.0%
Clear B5-B10	20,437,953	29.8%	1,553,280	29.8%
Clear B11-B19	-6,442,360	-2.4%	-914,827	-2.5%
Clear B20-B49	18,134,226	20.3%	3,653,886	20.5%
Clear B50-B100	-199,889	-44.2%	-99,942	-44.2%
Total Clear Biodiesel	33,402,218	7.9%	4,251,139	7.1%
Dyed Biodiesel				
Dyed D1-D4	1,425,855	373.7%	56,891	373.8%
Dyed D5-D10	-621,275	-2.4%	-31,072	-2.5%
Dyed D11-D19	713,125	9.7%	101,260	9.7%
Dyed D20-D49	-85,164	-9.3%	-15,799	-8.7%
Dyed D50-D100	294,997	1821.9%	147,500	1822.1%
Total Dyed Biodiesel	1,727,538	5.1%	258,780	10.4%
Total Change	-84,568,601	-5.0%	-5,477,258	-2.7%

Source: 2022 and 2021 Retailers Fuel Gallons Annual Reports

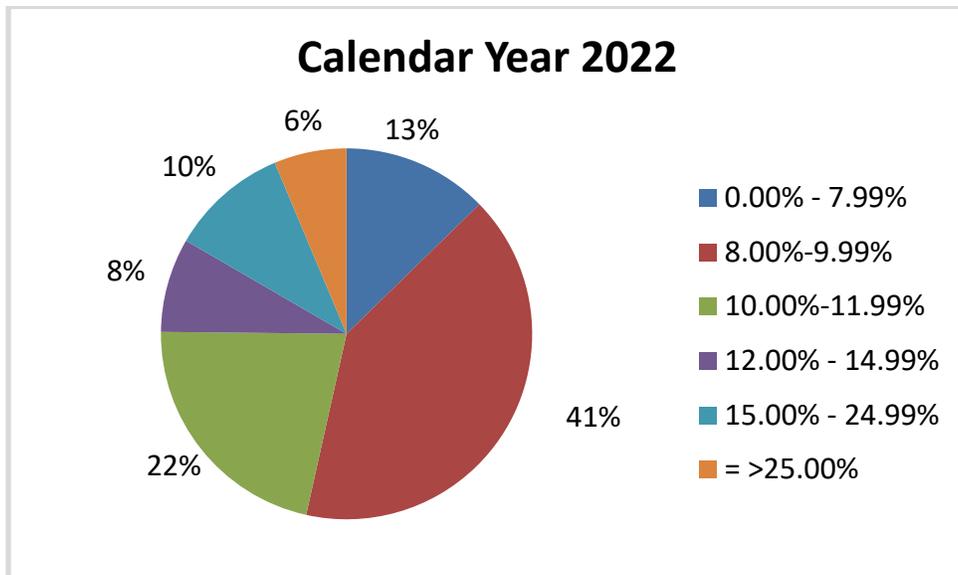
Figure 1 presents the biofuel distribution percentage calculated for calendar years 2010 through 2022. In 2017, retailers reported an increase in state-wide biofuel usage, mostly reflecting higher sales of E15, E85, and B20. Higher gallons of pure ethanol accounted for 30 percent of the growth with gains in pure biodiesel gallons accounting for the other 70 percent. In 2022, the biofuel usage calculation reflects a more accurate figure due to the increased filing from retailers. This number is expected to become even more precise once more filers submit their annual report.

While the overall biofuel distribution percentage decreased slightly, there were variations in the sales of different ethanol and biodiesel blends. According to Table 2, there was a decrease of 155 million gallons in E10 gallons between 2021 and 2022. However, E15 saw growth, with reported sales 33.5 million gallons (39.1%) higher than in 2021. It's worth noting that E15 is a blend of gasoline and ethanol that contains 15% ethanol, while E10 contains 10% ethanol. Additionally, E85, which contains up to 85% ethanol, saw a slight increase of 1.9% in sales. The table shows significant increases among D1-D4 and D50-D100.

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



Source: 2021 Retailers Fuel Gallons Annual Reports



Source: 2022 Retailers Fuel Gallons Annual Reports

In 2022, there were some changes in the percentage of retailers reporting their biofuel distribution percentages within certain ranges. The share of stations reporting a biofuel distribution percentage equal to or greater than 25 percent increased from 3 percent in 2021 to 6 percent in 2022.

Meanwhile, the percentage of retailers reporting biofuel distribution percentages between 0 percent and 7.99 percent increased to 13 percent in 2022. The share of retailers reporting a biofuel distribution percentage between 8.0 and 9.99 percent also increased by 27 percentage points, rising from 14 percent in 2021 to 41 percent in 2022.

However, the share of retailers reporting a biofuel distribution percentage between 10.0 and 11.99 percent decreased by 2 percentage points. The share of retailers reporting biofuel distribution percentages between 12.0 and 14.99 percent decreased significantly by 25 percentage points, dropping from 33 percent in 2021 to 8 percent in 2022. Additionally, the share of retailers reporting biofuel distribution percentages between 15.0 and 24.99 percent decreased from 27 percent in 2021 to 10 percent in 2022.

Figure 3 depicts the biofuel distribution percentage across Iowa retailers, highlighting the variation in sales by county. These percentages were computed based on the total sales reported by retailers who submitted the 2022 Retailers Fuel Gallons Annual Report. It is worth noting that every county had a biofuel distribution percentage of 9.4 percent or higher. A total of 8 counties reported biofuel distribution exceeding 25 percent.

Concurrently, 24 counties recorded pure biofuel sales between 15.0 and 24.99 percent of total gasoline sales, with 38 counties falling within the 12.0 to 14.99 percent category. Moreover, 28 counties had a biofuel distribution of 10.0 to 11.99 percent, while only one county had a biofuel distribution of 8.00 to 9.99 percent. To provide more detailed information on fuel sales, Table 3 presents data on the total gallons of different fuel types sold in each county.

Table 3. Calendar Year 2022 Total Gallons byCounty

County	Number of Retailers Reporting	Gasoline	Ethanol Sales	Clear and Dyed Diesel Sales	Clear and Dyed Biodiesel Sales	Pure Biofuel Sales	Biofuel Percentage
Adair	8	608,947	4,563,682	2,824,131	720,912	642,603	12%
Adams	*	106,845	1,348,137	126,673	183,143	202,876	14%
Allamakee	16	778,741	5,530,219	2,704,131	1,272,304	963,893	15%
Appanoose	7	394,735	3,519,549	1,725,428	405,017	550,042	14%
Audubon	6	212,417	2,193,847	2,210,342	929,879	445,896	19%
Benton	24	1,127,005	9,225,597	2,876,035	2,842,460	1,552,687	15%
Black Hawk	61	5,742,172	43,769,767	3,430,681	23,744,839	9,047,816	18%
Boone	11	808,010	7,156,304	3,004,711	547,627	801,991	10%
Bremer	13	1,586,047	9,051,114	1,091,626	2,189,255	1,390,927	13%
Buchanan	11	941,893	6,223,643	1,201,577	2,132,896	1,089,123	15%
Buena Vista	23	834,312	7,645,818	4,318,975	559,187	1,117,659	13%
Butler	12	818,899	4,912,462	1,545,741	1,186,206	707,068	12%
Calhoun	12	324,228	3,729,959	513,439	1,059,397	604,104	15%
Carroll	23	1,124,845	9,139,105	10,924,452	995,169	1,280,952	12%
Cass	12	704,915	5,938,009	6,689,245	324,032	749,878	11%
Cedar	13	904,817	7,778,036	6,865,612	9,208,928	2,049,530	24%
Cerro Gordo	25	2,725,688	22,336,288	13,860,521	6,846,823	3,795,733	15%
Cherokee	13	489,653	3,860,576	2,523,929	804,103	580,336	13%
Chickasaw	10	1,536,899	5,178,112	5,275,029	3,317,193	929,976	14%
Clarke	8	1,110,102	5,890,802	906,838	8,633,754	1,985,270	28%
Clay	17	944,024	10,268,839	1,451,317	687,819	1,216,511	11%
Clayton	21	1,118,956	6,795,737	2,191,457	1,313,069	979,689	12%
Clinton	28	3,864,162	18,716,866	4,038,386	5,018,786	2,738,833	12%
Crawford	9	541,246	4,256,321	2,375,852	127,224	497,299	10%
Dallas	38	4,077,357	31,927,924	6,977,763	4,473,506	4,020,669	11%
Davis	*	217,994	1,613,940	789,795	934,635	200,509	11%
Decatur	*	101,439	1,578,652	290,078	841,032	220,216	13%
Delaware	9	858,525	4,782,209	596,514	2,534,351	995,877	18%
Des Moines	17	1,115,430	13,089,831	740,876	245,076	1,536,616	11%
Dickinson	17	1,512,699	7,315,198	794,198	743,159	906,052	10%
Dubuque	47	6,153,434	34,489,749	6,497,929	14,036,997	4,805,418	12%
Emmet	7	291,963	3,034,339	743,340	84,713	379,385	11%
Fayette	13	553,204	4,826,028	295,713	595,168	593,000	11%
Floyd	12	593,836	5,668,109	2,417,318	8,552,332	1,882,320	30%
Franklin	8	801,587	3,419,149	2,231,466	1,291,884	700,459	17%
Fremont	8	978,826	6,089,336	1,588,281	13,765,227	2,621,879	37%
Greene	10	194,336	3,310,857	577,170	1,176,690	488,176	14%
Grundy	11	535,859	4,889,024	3,547,310	172,116	568,111	10%
Guthrie	11	764,904	5,147,027	715,091	5,972,664	1,615,265	27%
Hamilton	12	380,690	6,972,369	1,920,620	17,488,572	3,346,970	46%
Hancock	8	428,725	3,391,443	1,277,378	1,262,697	588,111	15%
Hardin	22	580,542	6,554,677	5,819,514	522,161	822,770	12%
Harrison	12	646,376	4,653,081	2,061,631	445,655	540,744	10%
Henry	16	1,147,458	17,266,956	2,508,688	10,045,885	3,617,042	20%
Howard	12	720,151	4,863,409	1,977,423	1,809,015	837,033	15%
Humboldt	11	505,046	3,937,117	4,144,824	379,186	506,301	11%
Ida	11	295,542	3,700,139	2,768,239	266,185	530,104	13%
Iowa	37	1,694,203	10,932,287	7,984,120	2,154,735	1,617,436	13%
Jackson	13	778,750	6,348,725	2,936,333	2,472,005	1,081,712	15%
Jasper	29	2,017,390	15,826,243	1,730,611	19,021,909	4,905,911	27%

Jefferson	15	673,620	4,802,622	1,333,546	1,191,106	723,609	13%
Johnson	44	5,927,261	34,916,249	3,836,196	2,929,002	4,131,926	10%
Jones	10	811,905	6,593,746	2,058,842	1,475,988	892,978	12%
Keokuk	9	412,539	3,908,824	2,155,215	923,639	579,993	13%
Kossuth	12	377,166	4,569,563	1,846,607	191,782	577,382	12%
Lee	25	1,306,101	11,643,931	3,357,078	419,417	1,214,967	9%
Linn	87	12,990,919	73,339,347	9,984,545	29,397,428	12,982,170	15%
Louisa	8	388,531	3,137,378	1,257,245	617,960	464,509	13%
Lucas	6	408,992	2,557,748	646,951	2,693,952	451,450	15%
Lyon	12	412,161	4,610,397	3,680,154	478,632	530,137	11%
Madison	8	444,958	6,507,413	19,758,610	767,409	842,340	12%
Mahaska	13	593,274	8,265,130	885,636	717,757	1,065,801	12%
Marion	22	1,830,830	12,343,224	4,693,403	1,698,922	1,787,718	13%
Marshall	20	2,187,954	11,468,918	1,809,590	1,183,888	1,613,770	12%
Mills	9	642,957	5,336,980	3,223,471	6,300,236	1,602,918	27%
Mitchell	9	379,396	3,162,176	1,982,069	411,491	531,906	15%
Monona	7	490,842	3,876,064	1,092,932	1,119,443	738,402	17%
Monroe	*	294,993	3,413,909	313,979	293,837	486,654	13%
Montgomery	8	546,896	4,137,184	1,772,217	1,564,098	636,863	14%
Muscatine	15	992,379	9,007,108	224,779	1,045,814	1,223,315	12%
O'Brien	18	652,977	6,388,576	3,184,726	737,879	903,347	13%
Osceola	7	180,179	2,469,340	3,781,668	-00	325,277	12%
Page	7	449,569	4,057,737	2,117,854	237,230	469,586	10%
Palo Alto	8	232,164	2,990,608	2,284,996	60,920	368,000	11%
Plymouth	17	1,988,553	11,231,435	17,236,510	1,783,229	1,561,159	12%
Pocahontas	6	377,863	3,098,958	8,380,318	185,012	377,667	11%
Polk	170	23,834,475	148,387,506	15,736,333	54,861,775	24,707,215	14%
Pottawattamie	40	6,494,411	37,831,366	25,007,668	44,560,474	10,943,444	25%
Poweshiek	19	1,099,520	8,057,250	6,041,533	16,505,787	3,036,638	33%
Ringgold	6	212,800	2,010,420	534,663	1,771,292	470,627	21%
Sac	14	422,782	4,491,161	1,355,455	2,451,074	859,227	17%
Scott	83	15,788,694	84,179,581	6,484,316	66,877,090	19,741,300	20%
Shelby	*	291,646	3,232,408	4,567,931	2,495,802	767,174	22%
Sioux	26	3,078,250	16,488,437	26,340,078	786,022	2,019,024	10%
Story	36	3,813,600	18,069,971	1,102,488	11,197,184	3,406,123	16%
Tama	16	907,882	7,287,340	3,034,783	1,941,770	1,109,554	14%
Taylor	7	197,363	1,867,529	657,351	903,145	317,172	15%
Union	10	561,687	4,841,642	1,106,496	1,391,862	800,251	15%
Van Buren	7	162,093	2,218,170	967,889	112,879	354,415	15%
Wapello	20	1,648,332	12,756,088	757,914	7,189,816	2,139,857	15%
Warren	23	1,807,249	15,434,061	735,086	1,675,966	1,877,322	11%
Washington	14	839,670	7,853,517	3,338,834	5,589,472	1,500,082	17%
Wayne	*	117,498	1,819,925	597,713	315,242	225,357	12%
Webster	27	1,402,457	15,080,477	1,295,709	3,017,998	2,253,936	14%
Winnebago	10	366,486	3,971,309	1,466,744	647,976	601,180	14%
Winneshiek	16	929,490	8,108,422	6,418,170	1,257,895	1,114,006	12%
Woodbury	37	4,513,733	30,361,445	7,722,465	19,074,435	6,201,216	18%
Worth	7	295,783	3,150,889	1,289,967	105,369	355,295	10%
Wright	14	505,965	3,978,543	3,503,292	197,417	455,224	10%

Source: 2022 Retailers Fuel Gallons Annual Reports

Note: * Counties less than five retailers reported sales.

Appendix
Iowa Gasoline, Diesel, and Biofuel Sales for Calendar Year 2021

Fuel Type	Locations	Gallons Sold	Pure Petroleum/Diesel	Pure Biofuel
Gasoline (Non-Ethanol)	1,334	183,150,085	183,150,085	0
Ethanol				
E10	1,562	1,126,536,031	1,013,882,418	112,653,614
E15 Registered	184	85,634,206	72,789,071	12,845,135
E15 Flex Fuel	37	1,303,047	1,107,589	195,458
E20	83	933,853	747,085	186,768
E85	286	19,259,849	4,044,567	15,215,282
Total Ethanol	1,571	1,233,666,986	1,092,570,730	141,096,257
Total Gasoline and Ethanol	1,645	1,416,817,071	1,275,720,815	141,096,257
Ethanol Share		87.07%		
Clear Diesel (Non-Biodiesel)	801	180,536,276	180,536,276	0
Clear Biodiesel				
Clear B1-B4	54	5,070,560	4,868,243	202,317
Clear B5-B10	341	68,563,929	63,353,073	5,210,857
Clear B11-B19	534	257,779,282	221,174,619	36,604,663
Clear B20-B49	157	89,174,230	71,339,380	17,834,850
Clear B50-B100	23	451,945	225,971	225,971
Subtotal Clear Biodiesel	681	421,039,946	360,961,286	60,078,658
Total Clear Diesel	1,214	601,576,222	541,497,562	60,078,658
Clear Biodiesel Share		69.99%		
Dyed Diesel (Non-Biodiesel)	325	132,806,648	132,806,648	0
Dyed Biodiesel				
Dyed D1-D4	15	381,464	366,245	15,219
Dyed D5-D10	93	24,880,071	23,636,061	1,244,010
Dyed D11-D19	42	7,336,881	6,295,042	1,041,839
Dyed D20-D49	30	907,081	725,664	181,417
Dyed D50-D100	12	16,191	8,095	8,095
Subtotal Dyed Biodiesel	126	33,521,688	31,031,107	2,490,580
Total Dyed Diesel	371	166,328,336	163,837,755	2,490,580
Dyed Biodiesel Share		20.15%		
Total Biodiesel	700	454,561,634	391,992,393	62,569,238
Total Diesel and Biodiesel	1,283	767,904,558	705,335,317	62,569,238
Biodiesel Share		59.20%		
Total Fuel	1,744	2,184,721,629	1,981,056,132	203,665,495
Pure Biofuel Share of Total Gasoline and Diesel Sales				9.3%
Biofuel Distribution Percentage				14.37%

Source: 2021 Retailers Fuel Gallons Annual Reports