# Market data 2019

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# **BDB**<sup>e</sup>

German Bioethanol Industry Association

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### Overview

The German Bioethanol Industry Association (Bundesverband der deutschen Bioethanolwirtschaft – BDBe\*) draws a mixed balance for the year 2019. Last year sales of bioethanol as a fuel additive in Germany fell slightly by about two per cent year-on-year to 1.16 million tonnes despite renewed growth of the petrol market. Sales of Super E10 petrol showed positive development in 2019: the market share of Super E10 rose from 12.9% in 2018 to 13.7%.

The volume of bioethanol produced in Germany for use as fuel fell last year to just under 543,000 tonnes, a significant decrease of 12.8% compared with 2018. This was due in part to an alignment of production with the more challenging market conditions at the beginning of 2019, which were characterised by weaker demand and volatile and falling prices for bioethanol.

## 1. Bioethanol production 2019

The bioethanol plants located in the federal states of Brandenburg, Mecklenburg-Western Pomerania, Saxony-Anhalt and Bavaria significantly reduced bioethanol production. A total of 651,565 tonnes of bioethanol were produced last year. Compared to 2018, this is a decline of 13.5%.

About 561,000 tonnes (86%) of production came from feed grain and just under 91,000 tonnes (about 14%) from sugar beet pulp. A low proportion of bioethanol was also produced from residues and waste materials, which was again not precisely quantified by the Federal Agency for Food and Agriculture (BLE).

| Bioethanol               | production by raw material (in tonnes) |         |         |        |
|--------------------------|--|---------|---------|--------|
|                          |  | 2019    | 2018    | +/-    |
| Total grain              |  | 560,872 | 592,359 | -5.3%  |
| of which:                | Maize                                  | 205,392 | 112,079 | 83.3%  |
|                          | Wheat                                  | 182,505 | 242,876 | -24.9% |
|                          | Other                                  | 172,975 | 237,404 | -27.1% |
| Molasses/sugar beet pulp |  | 90,693  | 161,231 | -43.7% |
| Other                    |  | no data | no data |        |
| Total*                   |  | 651,565 | 753,590 | -13.5% |
| *                        |  |         |         |        |

\* waste and residues are not included in the total sum (antitrust law)

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The bioethanol volume of just over 90,000 tonnes produced from sugar beet pulp or molasses corresponds to a raw material input of 909,151 tonnes of sugar beet and thus around 3.5% of the beet harvest. The reason for the significant decline in the percentage of sugar beets used in bioethanol production last year (-43.7% compared with 2018) was the need to satisfy demand for sugar.

Feed grain was used to produce around 561,000 tonnes of bioethanol last year (-5.3% compared to 2018). Around 2.4 million tonnes of feed grain were used as a raw material for this purpose. This corresponds in mathematical terms to 5.4% of Germany's grain harvest of 44.3 million tonnes in 2019.

In addition to bioethanol, the other plant components of the processed raw materials supplied proteins, dietary fibres, minerals and vitamins, which were processed into high-quality coproducts: protein feed from grains, concentrated feed from sugar beets and other products for the food and feed industry, gluten for aquaculture or biogenic carbon dioxide for beverages.

Due to the overall decline in German bioethanol production, less bioethanol also flowed into the chemical and pharmaceutical industries. The volume intended for use as a petrol admixture also decreased in 2019, falling by 12.8% to 542,699 tonnes (2018: 622,232 tonnes). The volume of bioethanol for the food industry grew by 6.2% to almost 110,000 tonnes (2018: 102,000 tonnes).

| Bioethanol use for (in tonnes) |         |         |                           |
|--------------------------------|---------|---------|---------------------------|
|                                | 2019    | 2018    | +/-                       |
| Automotive fuels               | 542,699 | 622,232 | -12.8%                    |
| Food and beverages             | 108,437 | 102,100 | 6.2%                      |
| Industry                       | 102,569 | 116,216 | -11.7%                    |
| Total*                         | 753,705 | 840,548 | -10.3%                    |
| +                              |         |         | @PDP <sup>6</sup> 02/2020 |

\*reports of ethanol traders included

Source: BLF ©BDB<sup>e</sup> 03/2020

#### 2. Bioethanol consumption 2019 on the fuel market

In a fuel market that increased again slightly in 2019 with petrol sales of 18.0 million, about one per cent more than in the previous year (2018: 17.8 million tonnes), the consumption of bioethanol blended with Super E10, Super Plus and Super (E5) fuel or used to produce ETBE (ethyl *tertiary* butyl ether) fell slightly to almost 1.16 million tonnes.

| Bioethanol consumption (EtOH) in Germany (in tonnes) |            |            |                           |  |  |  |
|--|------------|------------|---------------------------|--|--|--|
|  | 2019       | 2018       | +/-                       |  |  |  |
| EtOH total   | 1,160,954  | 1,187,362  | -2.2%                     |  |  |  |
| thereof: EtOH as an admixture                        | 1,072,990  | 1,077,434  | -0.4%                     |  |  |  |
| thereof: EtOH as ETBE                                | 87,964     | 109,928    | -20.0%                    |  |  |  |
| Total petrol (incl. EtOH)                            | 18,013,601 | 17,837,098 | 1.0%                      |  |  |  |
| Percentage of EtOH by volume in petrol               | 6.1%       | 6.3%       |                           |  |  |  |
| Source: BAFA   |            |            | ©BDB <sup>e</sup> 03/2020 |  |  |  |

While only just under 88,000 tonnes of bioethanol were used for ETBE production, around 20% less than in 2018 (110,000 tonnes), the market share of Super E10, which contains up to 10% bioethanol, rose to 13.7% (2018: 12.9%). The sales volume was 2.46 million tonnes. This figure was 2.31 million tonnes in the previous year.

At 14.7 million tonnes in 2019, Super E5 achieved a market share of 81.7%. In the previous year, the 14.7 million tonnes of Super (E5) sold represented a market share of 82.5%. The market share of Super Plus, which also contains up to 5.0% bioethanol, was only slightly above the previous year's level in 2019 at 4.6%, although at 833,000 tonnes, 2.8% more Super Plus was used as fuel than in the previous year (2018 810,000 tonnes).

| Petrol types 2018 and 2019 (in tonnes) |            |                   |            |                   |  |  |
|--|------------|-------------------|------------|-------------------|--|--|
|  | 2019       | Market share 2019 | 2018       | Market share 2018 |  |  |
| Super Plus                             | 833,442    | 4.6%              | 810,650    | 4.5%              |  |  |
| Super (E5)                             | 14,716,048 | 81.7%             | 14,717,831 | 82.5%             |  |  |
| Super E10                              | 2,464,111  | 13.7%             | 2,308,617  | 12.9%             |  |  |
| Total                                  | 18,013,601 |                   | 17,837,098 |                   |  |  |

Source: BAFA

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The total bioethanol in Super Plus, Super (E5) and Super E10 and ETBE was therefore 6.1% by volume. This percentage was 6.3% by volume in 2018.



#### 3. Outlook 2020

The impacts of the increase in the greenhouse gas savings quota from 4.0% to 6.0% at the end of 2019/2020 were already clearly evident on the petrol market in January 2020: bioethanol consumed as an additive for fuel at the beginning of the year increased by 6.3% to 102,000 tonnes compared with the same month last year.

Whether this positive trend will continue over the year as a whole is currently uncertain. Due to the global coronavirus outbreak at the beginning of March, it is not possible to make a reliable forecast for the 2020 fuel market. It has been declining sharply throughout Europe and Germany since March 2020, which should also impact sales of bioethanol as a petrol admixture.

On the other hand, additional sales opportunities are currently being created for the bioethanol industry due to the strong growth in demand for bioethanol as a basic material for the production of hand and surface disinfectants. For some weeks now German bioethanol producers have increasingly been supplying the chemical and pharmaceutical industries as well as pharmacies throughout Germany with bioethanol that had previously been sold on the fuel market.

\* The German Bioethanol Industry Association (BDBe) represents the interests of the biofuel sector's member companies and associations, spanning agricultural production of the raw materials all the way to industrial production and processing of bioethanol and all by-products. Co-products include DDGS, CDS, biogenic carbonic acid, gluten, yeast, biomethane and organic fertilisers. For fuel uses, beverages and food or the chemical industry, bioethanol with different classifications is produced from feed grain, sugar beet or biogenic waste and residues. In Germany, the types of petrol currently available at petrol stations contain between 5% and 10% certified sustainable bioethanol.