



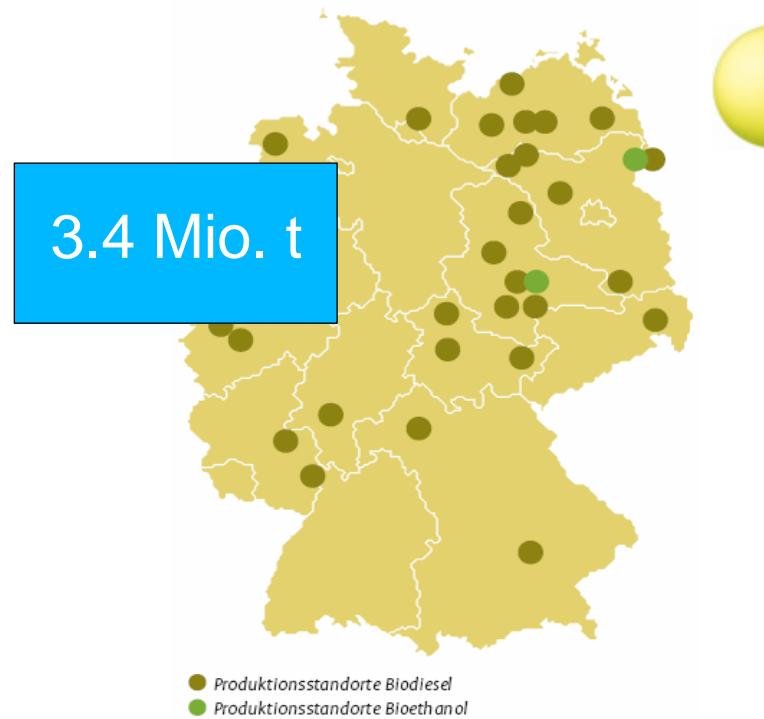
Zukunft tanken.

Does sustainable biodiesel have a future?

Elmar Baumann, Managing Director, VDB
Association of the German Biofuel Industry reg.
Ass.

Association of the German Biofuel Industry

- 23 producers:
 - 21 Biodiesel
(70% of capacity)
 - 2 Bioethanol
(30% of capacity)
- office: Berlin



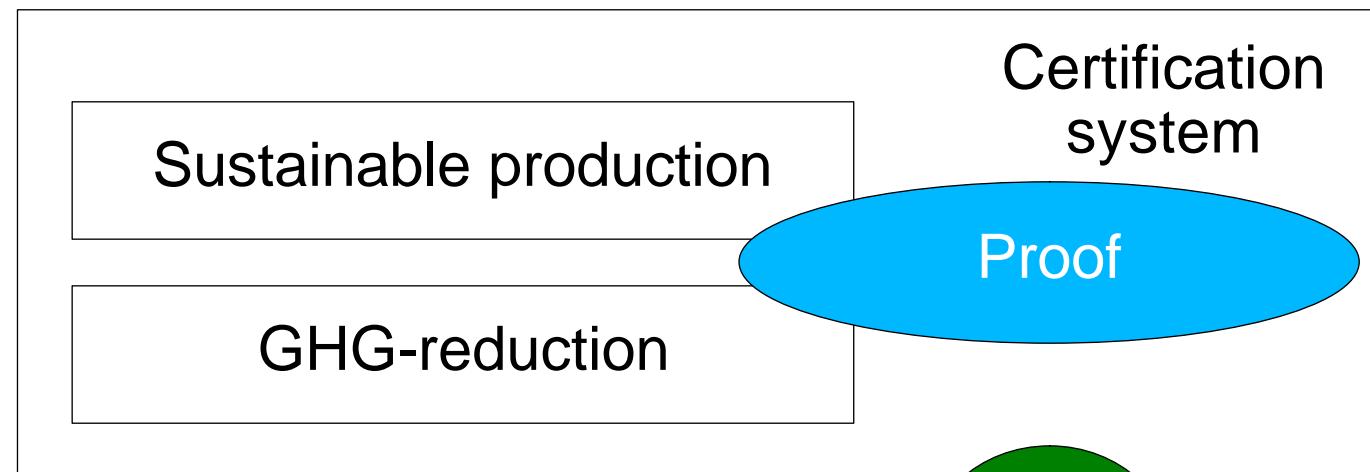
VDB, AGQM



zukunft tanken.



Verification of sustainability



Sustainable?

- 1. Feedstock supply**
- 2. GHG-performance**
- 3. Technical compatibility**
- 4. Relative price**
- 5. Political support**

1. Feedstock supply

- 1) Proof of sustainable agriculture
 - 2) Availability of plant oil
 - 3) [Additional sustainable feedstocks]
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2. GHG-performance

Optimisation

- 1) Conversion steps
- 2) Agricultural production
- 3) [Degraded land]

Optimising 1) Conversion

- RME: ca. 50% (38%)

2013: 35%

2017: 50%

2018: 60%

3. Technical compatibility

- 1) Standardisation
 - Fuel quality
- 2) Boiling range
 - Shortening of the chain
- 3) Reduction of Lube Oil dilution
 - Modified Post-Injection
 - Extracting Biodiesel from Lube Oil

4. Relative price

- FAME vs. Gasoil
- FAME vs. HVO and 2G
- Price per GHG-savings

5. Political support

- Image of biofuels
- Market access
- Post-2020-strategy

Sustainable FAME

1. Feedstock supply

2. GHG-performance

3. Technical compatibility

4. Relative price

5. Political support

SWOT



Biofuel development

ideal

Agriculture

Biodiesel

Mineral Oil Industry

OEM