

Successful Marketing for Biodiesel in Germany

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Two basic factors are responsible for the increase in the sales of biodiesel in Germany. Firstly, these factors conform to the public debate on environmental matters and secondly, they meet the basic agricultural requirements for the production of regenerative raw materials:

1. As part of agricultural reforms announced in 1992 by the EU Commission, a „decommissioning“ of land set aside program was introduced as a means of quantity control against surplus production. In its first year of implementation, the decommissioning rate was 15%. This opened up a vast area of land holding potential for the cultivation of regenerative raw materials for industrial and energy-related applications.
2. The implementation of this agricultural policy has been accompanied by an increasingly intensive debate on the effects of the still excessive consumption of fossil fuels, which has now reached the limits imposed by nature and the environment. In particular the discussion of the „greenhouse effect“ as an environmental issue finally led the German government to pass a resolution to reduce the emission of CO₂ by 25% until the year 2005. At the climate conference held in Kyoto, the German government reiterated its commitment to this goal.

Discussions and sales trends for biodiesel

At the same time another aspect is gaining significance: Already today, 50% of the European Union's energy consumption is dependent on imports. If no appropriate measures are introduced, then this proportion will grow to 70% by the year 2020, as clearly expressed on the white paper of the EU commission regarding types of regenerative energy. This particularly applies to crude oil and natural gas. The abrupt increase in the dependence on imports is attributable to the fact that during this period, the sources of crude oil and natural gas in the North Sea will dry up (1). Today, Norway is still the second largest exporter of crude oil in the world. Consequently, strategies are urgently needed to meet the requirements emerging from the environmental debate, and to reduce the increasing dependence on oil imports in Germany, particularly from regions which are known to be politically unstable. In this context bio-fuels - biodiesel in particular - can play a key role.

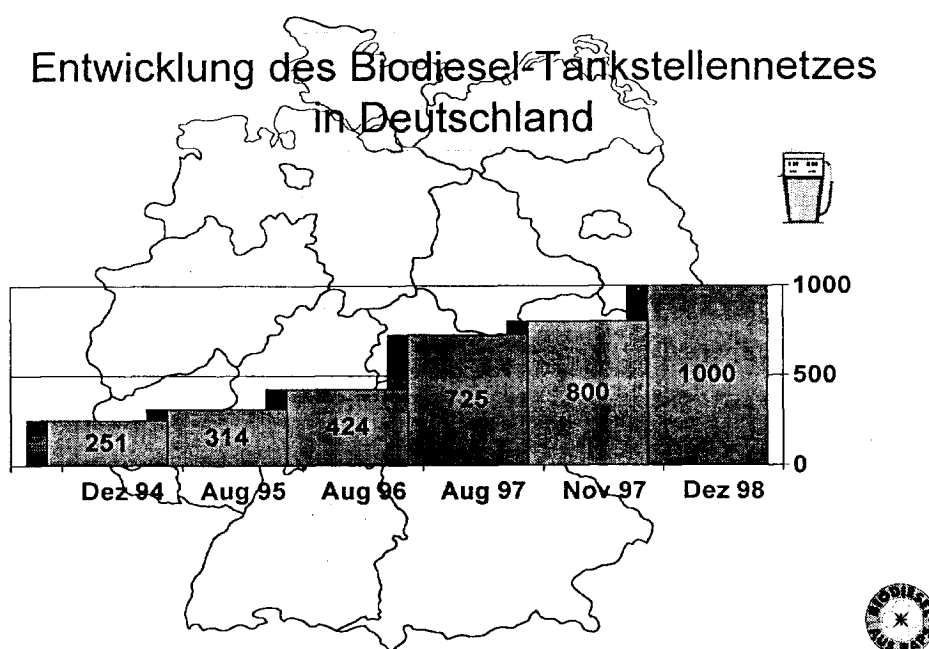
Biodiesel as methylesters produced from rapeseed oil is, besides wood, the most important commercial and environmental trendsetter among products derived from regenerative raw materials. Biodiesel - which is the generic term - is an environmentally friendly alternative which has been marketed in Germany exclusively as a pure substance for the last six years or so. The strategic challenge has been to establish a firm sense of consumer identification with domestically produced raw material, rapeseed oil in this case. This objective is pursued in particular by the Union for Promoting Oilseeds and Protein Plants (UFOP) as part of its public relations activities, which take place against a background of justifiably very critical consumer enquiries on the balance of energy and CO₂. For UFOP, this has had the following implications during the introduction of biodiesel to the market: This new fuel has not only needed to meet technical standards for powering engines, but has also convinced consumers and the public of its environmental friendliness, thanks to a positive and, in particular, transparent ecological assessment. The first evaluation of the ecological value of rapeseed oil and rape methyl ester, which was performed by appointment to the Federal Ministry of the Environment, even was over-rated in view of the quality it returned. On the other hand, the resulting discussions on biodiesel in social spheres ranging from consumer groups to political parties proved helpful in that they involuntarily made biodiesel a better-known commodity. This was accompanied by critical expert debate concerning the ecological balance, so that today results are obtainable which not only do justice to the product-related characteristics of biodiesel, but also to the manufacture and processing of raw materials. At the same time, this discussion had a favourable side effect: The topic of regenerative raw materials - particularly biodiesel - is being broached increasingly in schools; regarding its ecological assessment and students can now independently compute and evaluate the balance of energy and CO₂.

All this should be taken into account when considering the introduction of biodiesel to the German market. Due to rising interests in environmental issues, more attention is now focussed on biodiesel. Under the catchphrase "Local Agenda 21", communes are also dealing more intensively with questions concerning energy efficiency and sources of alternative energy, including fuel supply.

However, experience has shown that consumers are attracted not only by a positive effect on the environment, but especially by competitive prices - compared with the price of diesel in this case. Every car owner knows - and this applies in particular to operators of vehicle fleets - that a difference of just a few pennies per liter decisively determines whether or not a product is sold. Therefore, a breakthrough in the marketing of biodiesel was finally achieved when biodiesel was made available at the same price as regular diesel. This price threshold was attained at the beginning of 1994, thanks to the fact that the German government does not impose a sales tax on biodiesel and - we hope - will refrain from doing so in future. At the same time, technical advancements have made it possible to considerably lower production and distribution costs.

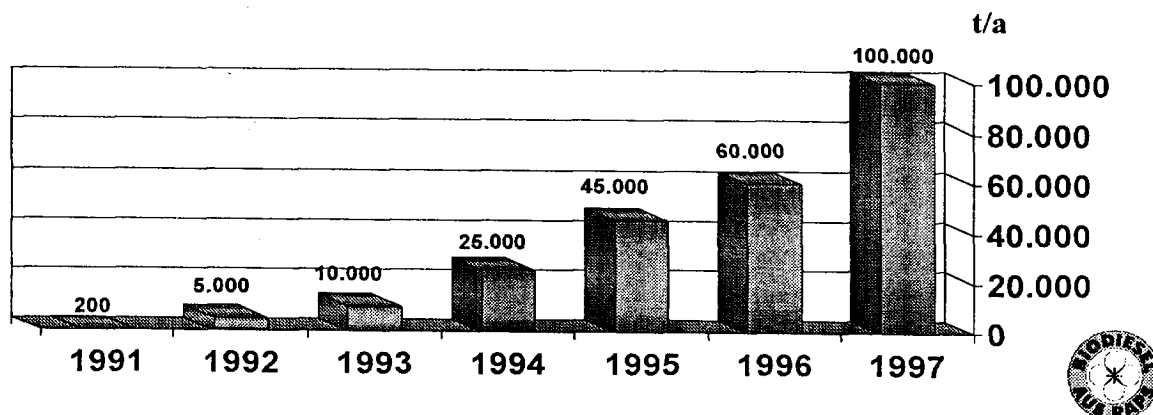
These developments have also been accompanied by an expansion of the network of filling stations and an increase in the number of large-scale consumers of biodiesel. At the end of November 1997, biodiesel was on offer at more than 800 public filling stations in Germany. Sellers of biodiesel predict that this number will exceed 1000 at the end of December 1998.

Table 1 : Entwicklung des Biodiesel-Tankstellennetzes in Deutschland
Development of petrol stations delivering biodiesel in Germany
Développement du réseau des stations-services fournissant du bio-diesel en Allemagne.



The sales and consumption of biodiesel in Germany has increased at a similar rate. About 5000 t were sold in 1992; this number rose to 25,000 in 1994, 45,000 in 1995, 60,000 in 1996 and roughly 100,000 in 1997. This positive development is the result of an intensive promotion of the sales of biodiesel; a decisive factor in this context has been the participation of the central and main agricultural cooperatives (Raiffeisen) from the very beginning. Their network of filling stations made it possible to increase the availability of biodiesel in 1994 and 1995. This provided an early indication to the automobile industry that biodiesel was on the way to being marketed on a nationwide basis. It was also an important factor promising success in obtaining manufacturers' authorizations for operation with biodiesel. The rapid rise in the sale of biodiesel in 1996 and 1997 can be attributed to the fact that leaded super petrol was withdrawn from the market in October 1996 and is no longer offered by public filling stations since. This has opened up the possibility of an economical storage at many filling stations in Germany.

Table 2 : Biodiesel-Verbrauch in Deutschland
Biodiesel-consumption in Germany
Consommation du bio-diesel en Allemagne



At the trade fair Automechanica in 1996, UFOP started an information campaign targeted to the operators of filling stations entitled "Biodiesel instead of super leaded." Distributors of mineral oil not only took notice of this campaign, but also responded by including biodiesel in their sales program. As a loose commodity, biodiesel has now been on offer in Germany for roughly 3 years. Again, there have been winners and dropouts. Some companies which saw the possibility of "earning a fast buck" with biodiesel later abandoned this strategy. Enterprises intending to sell biodiesel as a commercially viable product in the long run must develop appropriate marketing concepts. In this respect, biodiesel should be portrayed not so much as a competitive product, but as a supplementary fuel making it possible for vendors to get their "foot in the door" in the quest for new customers.

Particularly in the new eastern states of Germany, action must be taken to extend the network of filling stations. Understandably, existent infrastructures were not available as in western Germany. More urgent problems needed to be solved first as part of general restructuring and redevelopment of the economy. Now, it is all the more important to establish an efficient system for marketing biodiesel in these new states, particularly as they provide the highest rape production as a regenerative raw material for the manufacture of biodiesel.

Two-pronged approach and utilization of synergy effects

From the very beginning, UFOP has been a leader in promoting the sales of biodiesel. It has assumed the important responsibility of combining the specific interests of the manufacturers and vendors of biodiesel. A primary objective has been to implement a coordinated marketing concept for biodiesel in Germany, not least of all in order to optimize the utilization of synergy effects and scarce financial resources. A proven success in this case has been the UFOP's two-pronged approach: While introducing biodiesel to groups of specialists through press reports and as part of inter-regional publicity measures - particularly at trade fairs like the International Automobile Exhibition in Frankfurt - UFOP also promoted a large number of regional sales campaigns. These regional sales campaigns were undertaken not only by vendors of biodiesel, but also by state organizations and regional farmers' associations, which are participating actively up to this day. Thus, not only marketing companies but also the producers of raw material have contributed toward sponsoring the sales of biodiesel in Germany. This utilization of existing structures and the accompanying multiplier effect has been the key to the success of UFOP in this matter. Information published by UFOP on the topic of biodiesel is now available and noted throughout Germany. As a result, consumers are provided with consistent details regarding biodiesel, thus preventing contradictory news generating unwanted confusion and uncertainty. From the beginning all participants were aware that biodiesel is a product requiring some explanation. Certain "rules of the game" need to be observed in order to ensure trouble-free operation with biodiesel, particularly in the case of automobile models which have not yet been released for this purpose. Following the issue in June 1994 of a preliminary quality standard for biodiesel in accordance with DIN V 51606 (2) to the manufacturers and vendors of biodiesel, automobile manufacturers also adapted to the new situation and the increasing demand for the release of appropriately designed vehicles. The Volkswagen group has led the industry in this respect. All new automobile models manufactured by Volkswagen, Audi, Seat and Skoda are now released for operation with biodiesel, including all TDI engines. Other manufacturers of automobiles have also reacted, including foreign ones such as Volvo, who released types V70 and S70 at the end of November 1997. This development is being encouraged by the present boom in sales and the resulting, rapid emergence of new passenger-car models.

Challenges for the future

The production capacity for biodiesel in Germany was fully utilized in 1997, the sold quantity amounting to roughly 100,000 t. Now, it is necessary to implement further projects for the purpose of creating additional capacities for transesterification. In terms of the processing of raw materials and the marketing of biodiesel, this capacity must be spread optimally throughout Germany. The transesterification plant at the Connemann oil mill in Leer and the density of the local network of filling stations, for example, makes it clearly evident that sales activities are inevitably concentrated around transesterification plants after distribution costs have been optimized.

From the technical point of view, action must be taken to optimize diesel engines for operation with biodiesel, in spite of the large number of releases issued so far. Biodiesel contains 11% oxygen, which leaves a lot room for improvement, particularly regarding reductions in NO_x values, as initial investigations have shown (3). The fact that biodiesel can cover no more than 5% of the demand for diesel fuel in Germany requires a fundamental consideration of the areas in which biodiesel should be used so as to optimize the benefit to the environment. These might include, for example, the operation of diesel engines in closed rooms, fleet operation in conurbations, and engines for motorboats on inland waterways. Such areas should be specified and assigned for the use of biodiesel through appropriate legislation. This would also create the economic incentive necessary to optimize the production of biodiesel engines intended for these areas of application. Also it is necessary for the responsible states to specify requirements which can be fulfilled easily and economically in order to obtain authorization for the storage of biodiesel.

In future the rate of proliferation of biodiesel as a commercial product will depend on the extent to which related political bills influence the competitiveness of biodiesel, and the extent to which its preferred areas of application - from the environmental point of view - are set aside for this purpose. For this reason, a very careful appraisal of the most important uses of biodiesel is recommended, particularly in view of its scarcity. Such promotion of the use of biodiesel in an application-oriented and environmentally-friendly manner will be accompanied by a growing political and economic acceptance of this product.

Another basic prerequisite is an equal opportunity for alternative fuels to compete. We must not allow a situation in which, on one hand, fossil fuels contribute to a reduction in the rate of inflation in Germany to a level below 2%, while on the other hand, biodiesel is repeatedly the subject of prejudiced discussions of subsidies, which principally apply to all forms of regenerative energy. Prices must not be dictated by short-term fluctuations in supply and demand on spot markets and short-term contracts to deliver limited reserves of crude oil. Instead, prices must be determined in view of the fact that the present costs of fossil fuel - particularly petrol and diesel - bear no testimony to their actual scarcity or the resulting harm to the environment. Consequently, biodiesel not only exemplifies what is now a commercially viable alternative, but also a product which will cause a change in the public attitude of energy consumers.

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