



## Ecobalance:

# Pasta from Germany beats foreign competition

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**The University of Hohenheim's Ecobalance Study compares various production regions for durum wheat / Increased demand for regional products**

**Regional products are becoming increasingly popular with German consumers, beating even organic products. In the case of durum wheat (hard wheat), this is rightfully so according to the results of an ecobalance study conducted by the University of Hohenheim. The study compares in detail the environmental effects of durum production in Germany and the most important import countries. In terms of fertilizer, yields per hectare, and environmental effects, durum wheat grown in Germany showed only good results. The only problem: there isn't enough of it.**

**A summary of the study in German can be found here: [uhoh.de/pmdurumweizen](http://uhoh.de/pmdurumweizen)**



[Image: Clipdealer](#)

Each adult in Germany eats on average 8.3 kg of pasta annually, and the trend is increasing. The main ingredient in these popular noodles: durum wheat, also known as macaroni wheat or hard wheat. In order to cover the annual consumption, the German durum-processing industry needs around 400,000 tons of durum wheat grain.

Domestic production only covers around one-third of demand, however. “Two-thirds of the durum needed is imported from abroad”, says Moritz Wagner, a scientific staff member in the department of Biobased Products and Energy Crops at the University of Hohenheim. “Durum grain comes primarily from North Dakota in the USA, Saskatchewan in Canada, Andalusia in Spain, Italy, and France. The long transportation routes from Southern Europe or even more so from the middle of North America using lorries, trains, and ships consume a great deal of energy and therefore have a serious negative effect on the environment.”

The scientists' conclusion: In order to do justice to the German consumers' demands for products that are from the region and environmentally friendly, production in Germany should be significantly increased.

## **German durum: high quality, short transportation routes, efficient use of fertilizer**

Durum from Germany scored high not only due to the short transportation routes: “Despite very high yields, German durum farmers use the least amount of nitrogen fertilizer per 1kg crop yield. In comparison to the production regions for imported durum, German durum scored very high”, says Prof. Dr. Iris Lewandowski, agronomist at the University of Hohenheim.

In addition, not all production regions should be considered equal. “According to our results, France and Italy can be recommended as the best alternatives. These production regions had the best ecobalance after Germany,” notes Dr. Friedrich Longin, scientist at the University of Hohenheim’s State Plant Breeding Institute.

The authors’ opinion is that producers should refrain from using imports from the USA or Canada. Due to the low yields and the high use of fertilizer, Spain is also not a good alternative.

### **An overview of the most important results from the Ecobalance Study:**

- Worldwide, German durum production has the highest yield per hectare and produces crops of excellent quality but does not yield enough product. From an ecological perspective, the domestic production area should be at least doubled.
- Greenhouse gas potential: Durum production in Germany had the best results in this area, as it has the lowest greenhouse gas potential per kilogram of durum grain. Canada came in second place. The USA, France, and Italy were in the mid-range, and Spain came in last. The reason for Spain’s low placement is the high amount of nitrogen fertilizers used in relation to comparatively low yields.
- Eutrophication and acidification potentials: German durum production is the most environmentally friendly amongst the countries compared. Spain came in last place for eutrophication potential (as with greenhouse gas potential). The durum from the production regions in the USA and Canada had the worst acidification potential scores.
- Transportation distance: Within Europe, imported durum travels hundreds of kilometres on lorries from the Paris Basin, Southern France, Southern Italy, or Andalusia. Large amounts also arrive via ship from the USA or Canada. These long distances to the durum mills in Germany have a heavy environmental impact due to greenhouse gas emissions.
- Production efficiency: Durum is fertilized intensively in Germany with 160 kg nitrogen per hectare, but the German farmers produce the highest yields and therefore demonstrate the most efficient use of nitrogen as well as good protein enrichment of the grain.

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