

Is gluten free the healthier option for most of us?



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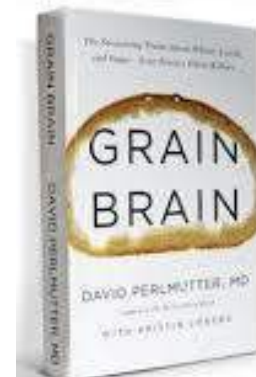
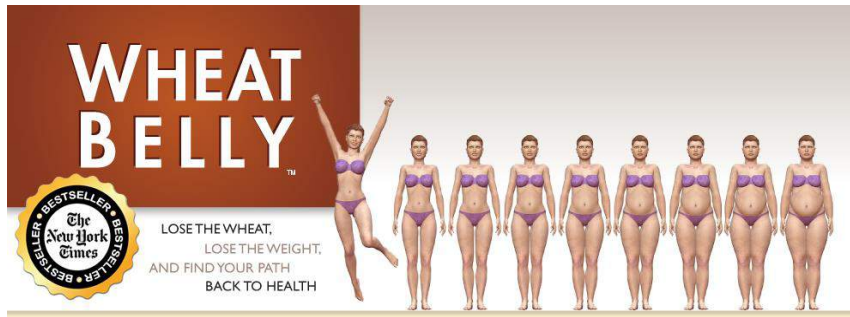
Maastricht University

The Netherlands

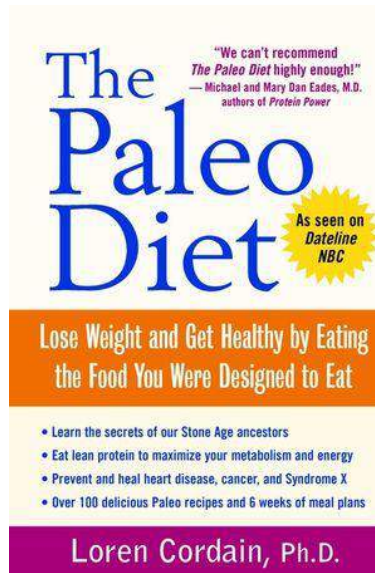
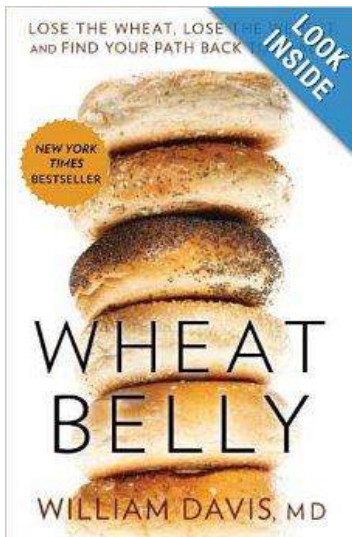
Brouns Health Food Consulting



Consumption of wheat-foods is the cause of obesity and chronic disease say Davis, Perlmutter, o.a.



**GRAIN
BRAIN**
*The Surprising Truth About
Wheat, Carbs, and Sugar - Your
Brain's Silent Killers*



Suggested wheat sick-makers

- Wheat protein: Glutenin & Gliadin (= prolamins)
- Lectins: crop protecting glycoproteins: WGA-Wheat Gluten Agglutinin
- Gluten-morphins: Peptides with morphine/opioid like activity.
- ATI's : amylase –trypsin inhibitors



→ consumers started skipping healthy grain foods from their diets, replacing them with gluten free cereal foods?

Global social media hype:

“Eating wheat makes you fat and sick!”

Some strong assumptions were put forward

**We have only been eating grains for 10.000 years,
too short to adapt our genes to it....**

**Modern wheat has been genetically modified →
contains more ick making components than ancient
grains...**

Free from gluten/wheat foods are healthier

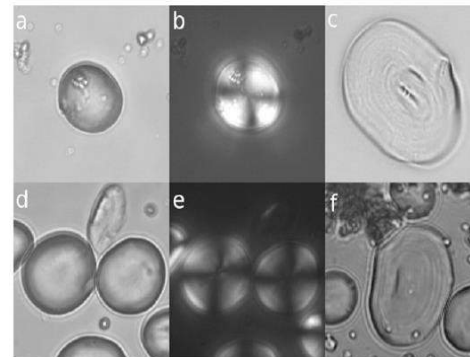
What are the facts?

Large scale **processing of wild cereal grains at ohalo II, a 23 000-year old campsite Israel**

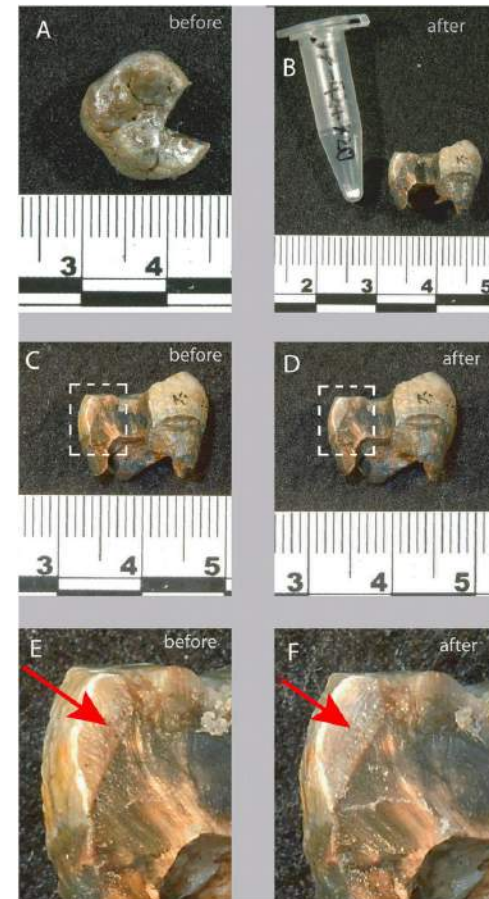


Nadel et al. Antiquity. Vol. 86, 334,
Dec. 2012, Pages 990-1003

45.000 years ago: Micro-particles in dental enamel prove consumption : **dates, vegetables, roots, wheat, rye and barley** in the Neanderthal diet



- 1-4 million years: our ancestors in Kenia
 consumed a die composed mainly of **plants**,
grasses and seeds



Fossil grain- 300 milion yrs found: Geo park Araripe- Brasil



From > 100.000 varieties the better ones were selected, based on yield and labor needs

- Resistance against disease and pests

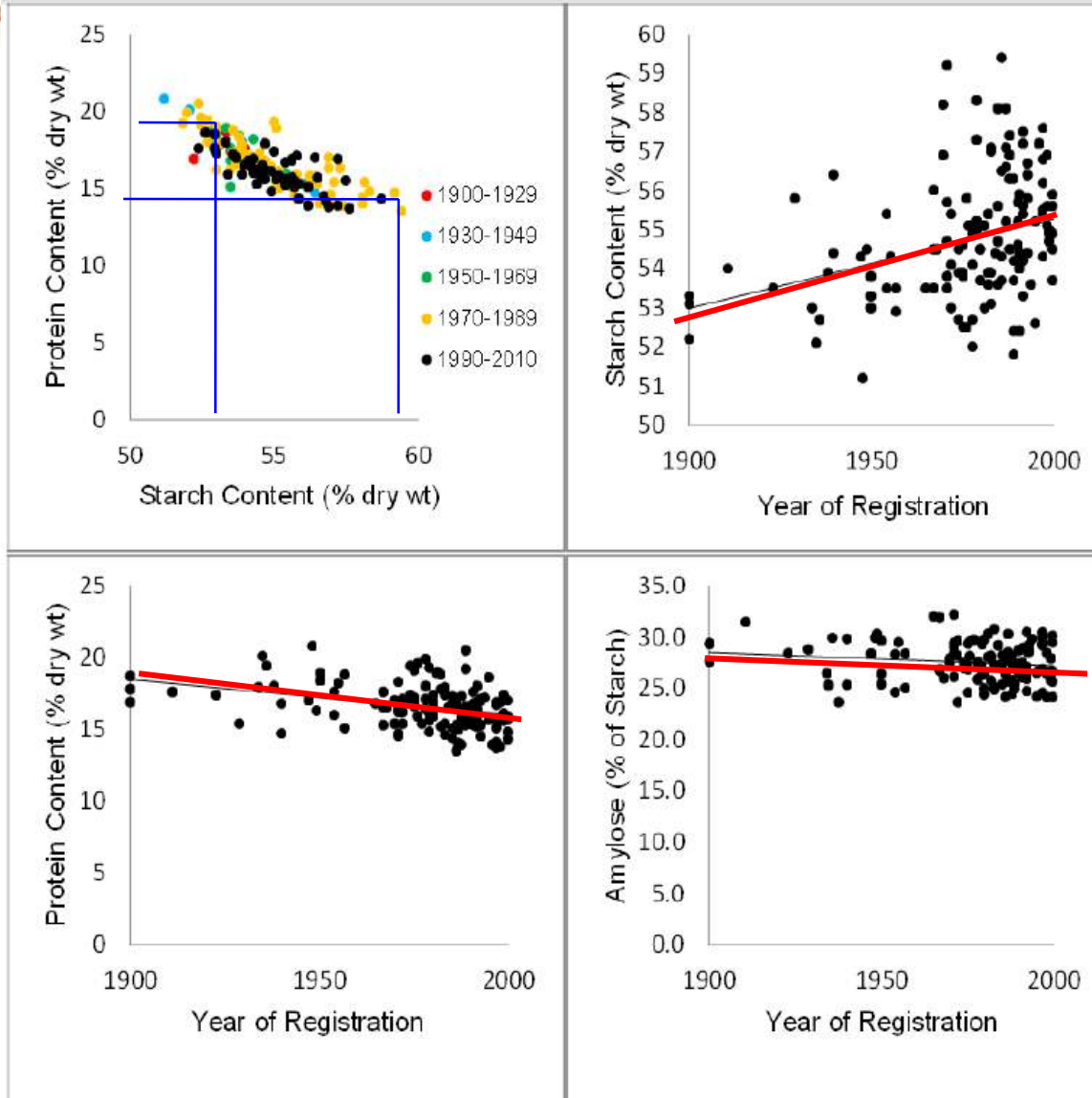
- Volume

- Starch
- Protein



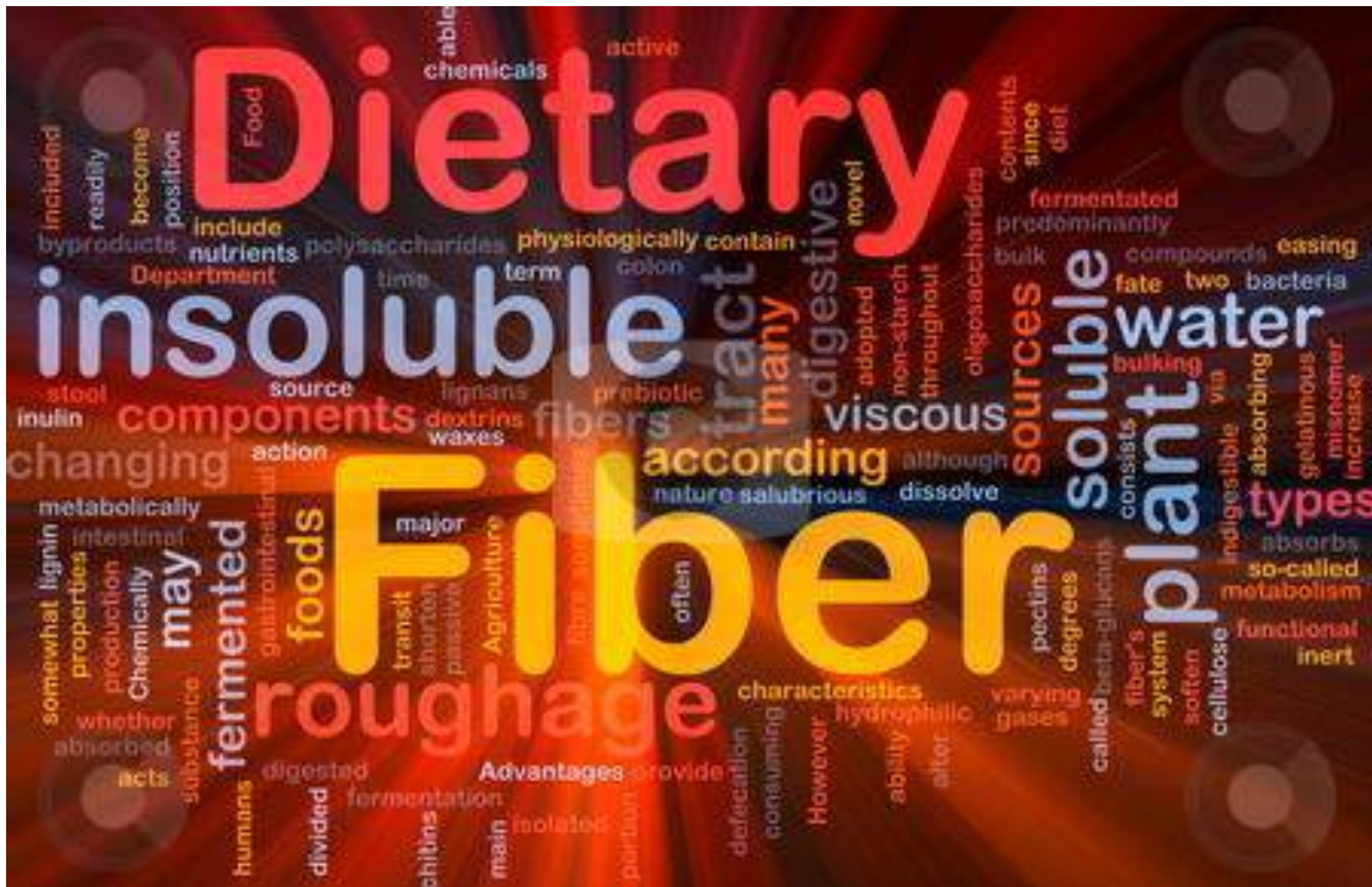
- Threshability



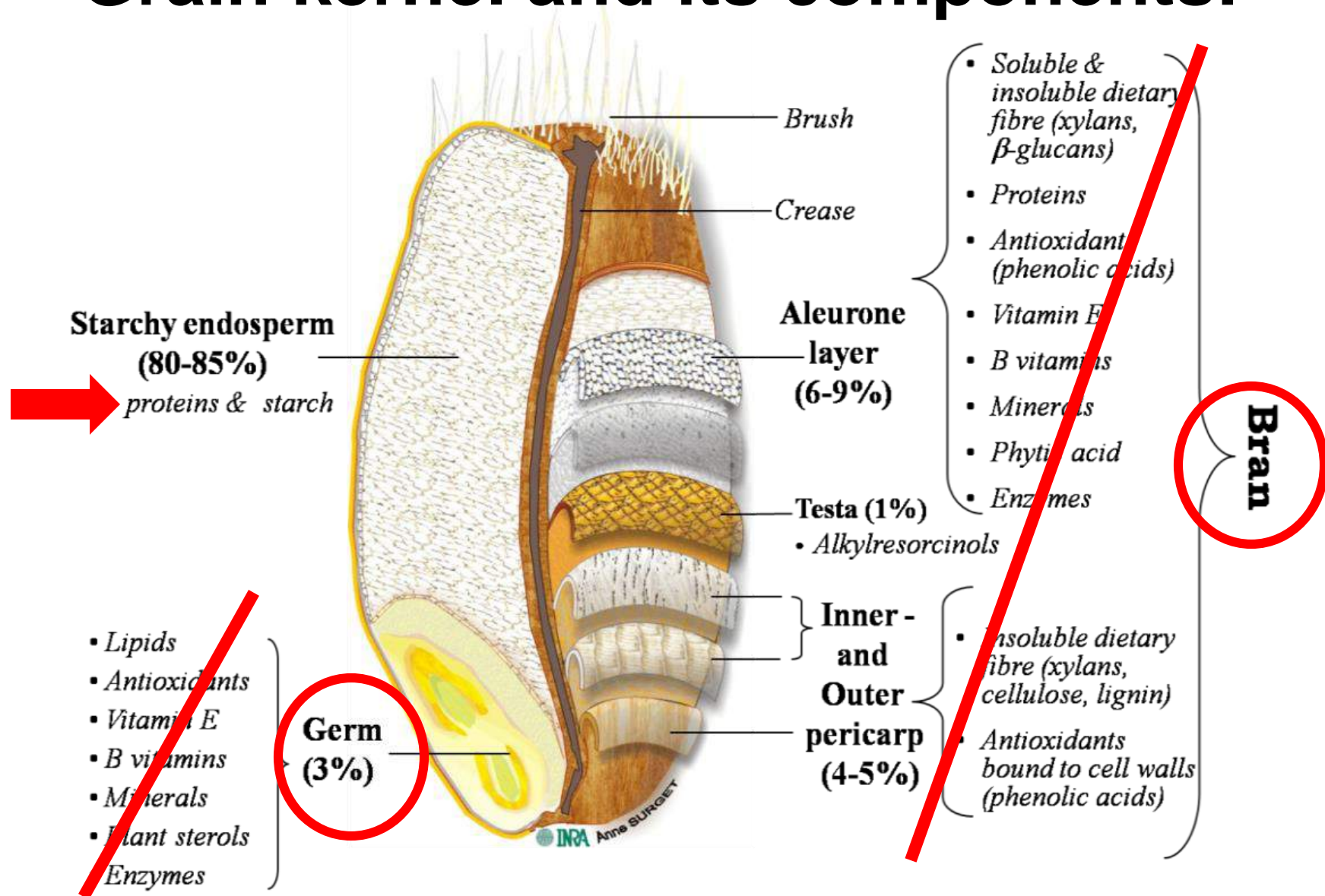


Relationships between the contents of starch, protein, % amylose in starch and year of registration in 145 lines of winter wheat grown in 2005. ➔ slight decline in grain protein over time

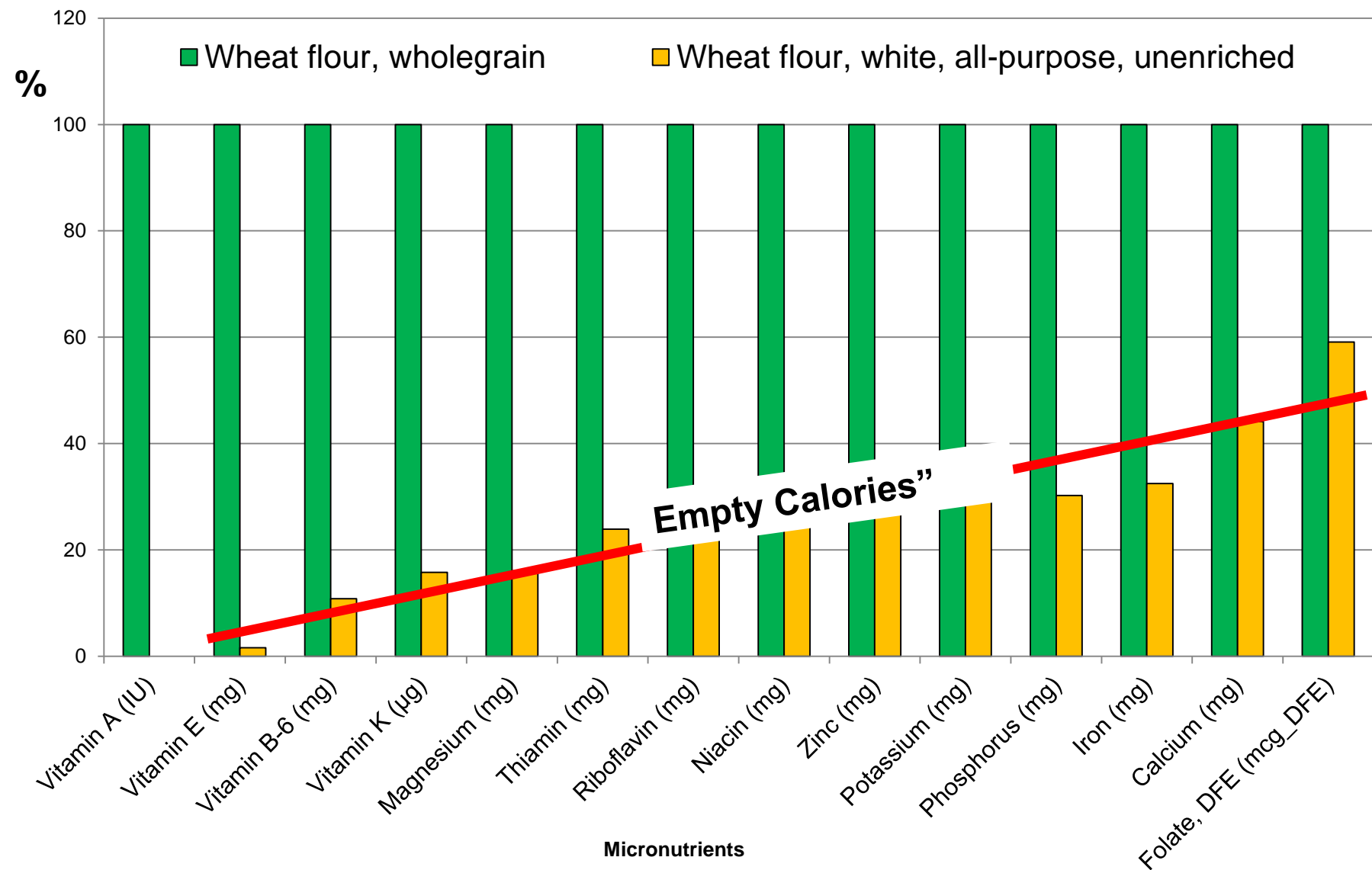
Most health benefits of WG are due to the Fiber-Nutrients Complex



Grain kernel and its components:



Differences between WGF and RF



Most health benefits of WG are due to the Fiber-Nutrients Complex

A very sign part of daily fiber intake comes from Cereal Foods consumption

Wheat, rye, barley and oat free eating will reduce fiber intake and increase disease risks



Take home messages from current science:

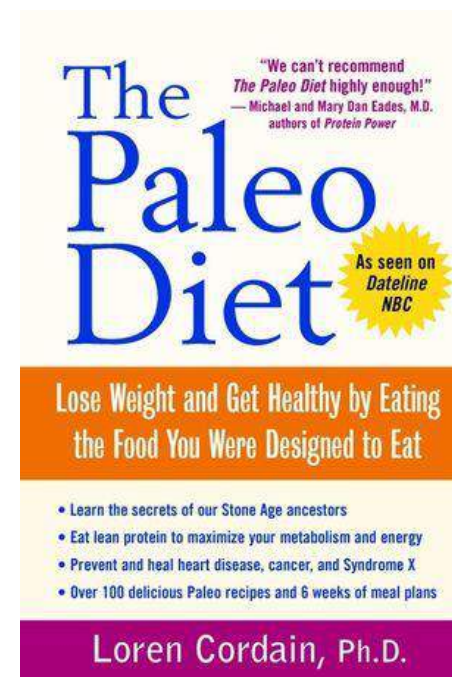
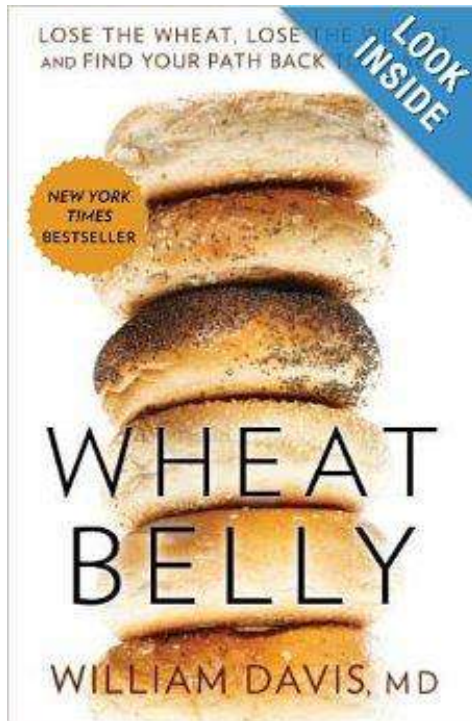
- Wheat, Rye and Barley have been grown as a staple food **much earlier than the suggested 10.000 years,**
- Much later, 10.000 years ago, the commercial spreading of the farmer-selected **bread-wheat** took place.
- This modern bread-wheat resulted from natural cross-fertilization and selection for the “best crops



Take home messages from current science:

- GMO grains never made it to market!
- Whether bread-wheat does have higher levels of toxic epitopes, ATI's and lectins that lead to intolerance can not be answered at this moment
- There are no good data supporting the notion ancient wheats are healthier than modern bread-wheat
- Whole grains, incl. gluten, are excellent food sources for the majority of the population → sign. reduction in risks for Diabetes, CVD, colon cancer, more favorable weight management

This stands in complete contrast to popular books and social media sources
→ modern wheat makes you fat and sick



Are Gluten Free (GF) Products the healthier option?

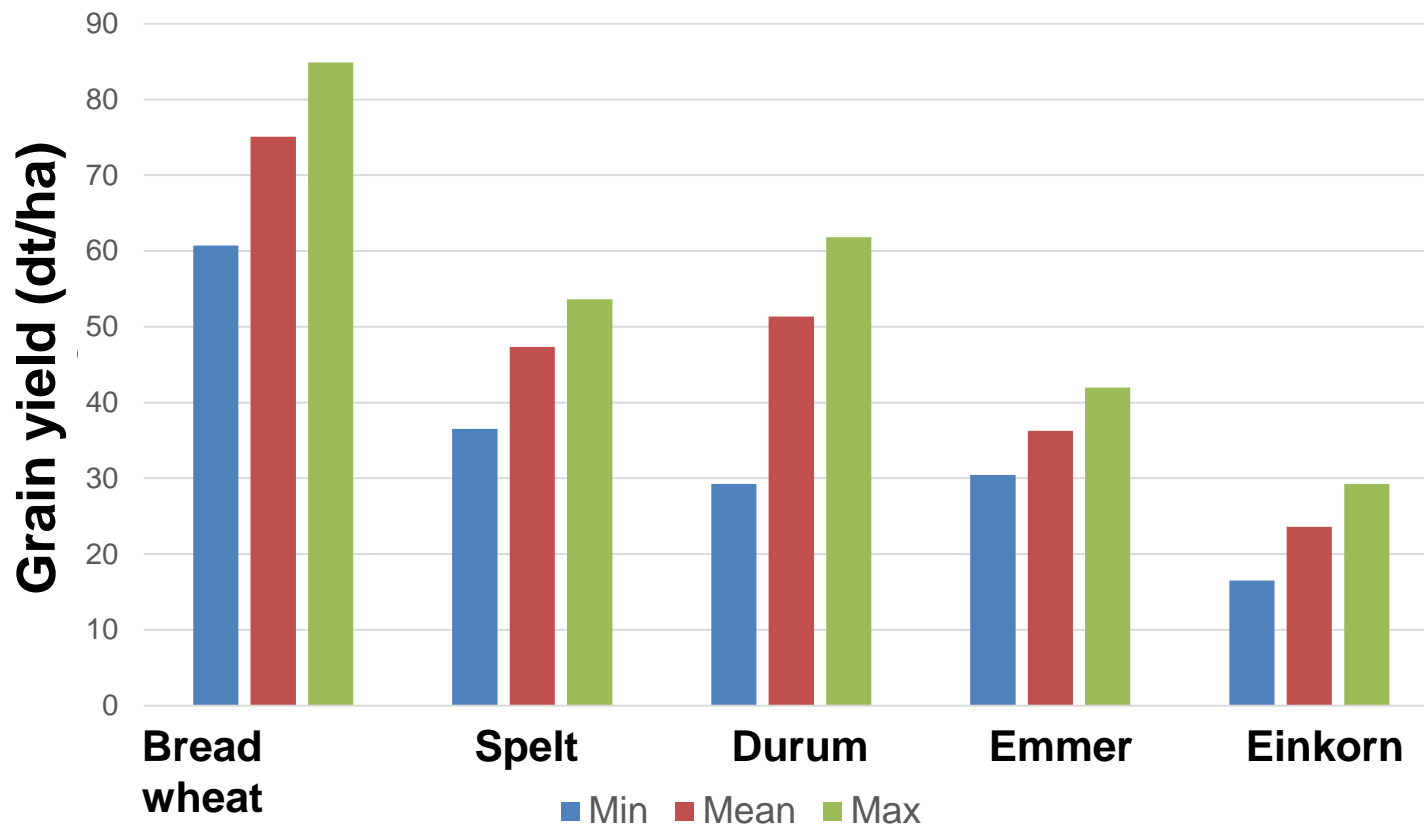
- Contain < 20 ppm gluten
- OAT and other cereals may be contaminated by “wheat rest kernels” in fields and in the transport-supply chain
- Most GF products contain flours from rice, corn, tapioca, potato, etc devoid in fiber and micronutrients →
 - GF foods are often less healthy in composition: contain more fat, more starch, less protein, less micronutrients
- **Gluten/wheat free is only the healthier option for individuals with CD, Gluten allergy, or wheat intolerance**
 - Ancient cereals are not sustainable and expensive!

Grain yield potential



©

15 varieties per species tested at 4 locations in Germany



Reduced grain yield must be compensated by higher price in order to attract the farmer's interest



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Join the global research initiative to unravel wheat and gluten related health concerns

News articles



Based on a number of recent studies, the related questions about the level of gluten in food, the impact of the social media drive, to avoid the consumption of gluten-containing grains, there is a urgent need for more research. This matter is especially the case since in most published studies the types of grains used have been very poorly characterized and described, making many conclusions questionable. The composition of different cereals used, the changes in composition during processing (e.g. using yeast or sourdough culture, extrusion, etc.) are not well understood.

The ultimate aim of the project is to provide reliable data on the impact of wheat based foods, for the development of more data. The latter is of crucial importance in the context of "good food for a healthy life" and its impact on the cereal supply chain and food industry.

The project is seeking for active participation of the cereal foods chain related stakeholders. Please see the attached PDF file for more information about the background and aims of the project.

For more interest and full project details contact Fred Brouns from the HealthGrain Forum at fred.brouns@maastrichtuniversity.nl.

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