

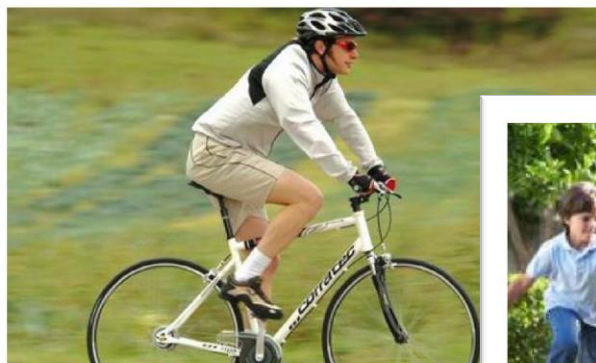


TURKEY FLOUR INDUSTRIALISTS'

FEDERATION

ROLE OF FLOUR AND BREAD

IN HEALTHY NUTRITION





GÖBEKLİTEPE HÖYÜĞÜ, Şanlıurfa

B.C. 9000

“A Milestone in History”

- ✓ **First CIVILIZATION**
- ✓ **First WHEAT**
- ✓ **First FARMER**
- ✓ **First FLOUR**
- ✓ **First BREAD**



It is known that first gristmills in the history are in the **Central Anatolia**. The flour is a valuable product that is obtained by grinding the cereals, and is a first food used by a modern human. **Göbeklitepe**, oldest known religious buildings community in the world from the Neolithic Age in Şanlıurfa has gained importance in the world due to it is a terrain where the first known cultivation of wheat and first farming begin by using wild wheat for the first time in history of humanity.

Click to access some of the articles

(<http://www.usf.org.tr/EN/dosya/2-327/h/turkey-wheat-the-cornerstone-of-an-empire.pdf>)

and **videos** (<http://www.youtube.com/watch?v=9qyD3EjU0Gg>) of archaeologists and historians of the world about Göbeklitepe.



Turkey Flour Industrialists' Federation

The Babylonians knew how to cook bread in the special ovens. It has been proved in the findings obtained from archaeological excavations.

They made bread softer and more delicious by adding yeast in it. The bread began to increase in value that it was used instead of the money.

The production of the bread was industrialized and spread rapidly after yeast is known actively. The role and importance of the bread is different for every religion and culture.

B.C.
4000

Babylonians

B.C.
2600

Ancient Egyptians

15th Century-
∞

Central Europe and Whole World



The essential nutrient the bread that is consumed deliciously since the earliest age that human being exists, **the largest source of carbohydrates** in a day, that **meets vitamin and mineral requirements significantly** has become an indispensable part of our tables. **60% of daily energy needed by our body is met from cereal products.** The type of cereal that is most commonly consumed for nutrition is wheat, bread and derivatives. Turkey is a one of the countries that are quite favorable in wheat production in terms of climate and geography. The bread is a symbol for the public that contains solidarity, business life and survival.

The content of the bread which has such a big role in our lives is now more nutritious and more natural by New Bread and Bread Varieties Statement, Flour Statement and Turkish Food Codex Additives Regulation.





We, as **Turkey Flour Industrialists Federation (TUSAF)**, have brought forward the importance and enrichment of the flour and therefore bread, and protected this social responsibility with regard to the importance of the bread in our nutrition, enriching the flour and healthy bread both within the framework of awareness and social responsibility projects in different environments in the organizations that Ministry of Food, Agriculture and Livestock, Agricultural Products Office, Ministry of Health and academics from various universities, dietitians and other non-governmental organizations as well as international organizations are participated.

The relevant process was completed by new applications prepared in accordance with Turkish Food Codex with respect to flour, bread production and packaging for last two years.

Bread and Bread Varieties Statement became effective as from January 4, 2012, **Regulation of Food Additives** as from July 1, 2013 , **Flour Statement** as from July 2, 2013

(<http://www.usf.org.tr/EN/dosya/2-971/h/-un-tebligi-2-nisan-2013--eng.pdf>). All of these studies are for the production and consumption of healthier bread.



The Flour Statement aims to provide the most important vital nutrients sources of a person while naturally consuming the bread, by clearing the way for enrichment of the bread. In our new bread to be produced, content of fiber, protein and beneficial fats was increased and content of starch was decreased. **Under New Flour Statement, the bread flour will not contain foreign taste and odor and there will not be any foreign matter in the flour and wheat flour will have unique color and appearance.**



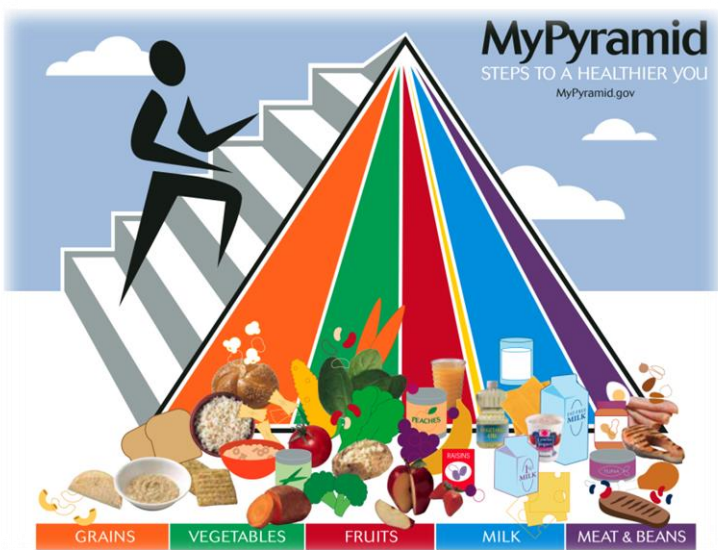
According to Statement; **at least %98 of wheat flours will be filtered by a sieve of 212 microns.** The enzyme activity prepared from wheat, rye and barley, high malt flour or other malt products and vital wheat gluten can be added to wheat flour as needed for technological purposes. In the same way also legume flours can be added to special-purpose wheat flours as needed for technological purposes. Net weight of the flour will be calculated based on **14.5% humidity.**



The flour used in the bread production is supported by very important nutritional values such as natural vitamins and mineral or enriched with the fiber in natural structure of the wheat and the vitamin and mineral-rich bran and wheat germ, and therefore people take a lot of nutritional values that are necessary for their healthier lives while consuming bread.



Within the process of passing to this new period, we as TUSAF sent our samples prepared in accordance with the Flour Statement issued on April 2, 2013 to TÜBİTAK (The Scientific and Technological Research Council of Turkey) for examination purpose and their technical analyzes were carried out. It was observed on the data as a result of these analyzes that the flour samples adapted to the New Flour Statement show significant increase with respect to contents of vitamin, mineral and fiber. The accuracy of the values obtained has been confirmed by the Hacettepe University.



In our new bread to be produced, the content of fiber, protein and beneficial fats will increase and the content of starch will decrease. In this regard, when 200 grams of new bread are consumed in a day, 35% of the energy, 25% of the protein, 66% vitamin B1, 55% of fiber requirement that are necessary for a person on the average are met, and also the most important vital nutrients sources such as magnesium, potassium, sodium, vitamin A, vitamin E, vitamin B1, vitamin B2, vitamin B6, Niacin, Copper, Zinc, Iron and Phosphate will be taken while consuming bread.



	0.55% Cinder	0.75% Cinder
ANALYSIS	Bread Flour Before Statement	New Bread Flour
* Energy 1	344 kcal/100g	341 kcal/100g
* Humidity	12.92g/100g	13.07 g/100g
* Protein	10.94 g/100g (Nx5.70)	10.43 g/100g (Nx5.70)
* Carbohydrate (2)	71.31g/100g	70.48g /100g
* Dietary Fiber ↑	3.54g/100g	4.50g/100g
* Fat	0.89g/100g	0.95 g/100 g
Mg (Magnesium) ↑	274.95mg/kg	414.8 mg /kg
K (Potassium) ↑	1111mg/kg	1381 mg/kg
Na (Sodium) ↓	22.39 mg /kg	19.41 mg/kg
Crude fiber (Cellulose) ↑	0.15%	0.56%
Total acidity (In dry matter)	0.05g/100g (In sulfuric acid)	0.06 g/100g (In sulfuric acid)
Falling number	254	227
Sedimentation test	44ml	34 ml
Starch (with kit)	57.69%	57.42%
Modified sedimentation test	60 ml	42ml
* Vitamin A (Vitamin A Retinol)	6.77 µg/ 100g	6.73 µg/100g
* Vitamin E (alpha tocopherol)	0.56mg/100g	0.54 g/100g
* Vitamin B1 (thiamine) ↑	0.13 mg/100g	0.25 mg/100g
* Vitamin B2 (lactoflavin)	0.03 mg/100g	0.03 mg/100g
* Vitamin B6 ↑	0.05 mg/100g	0.09 mg/100g
* Niacin (nicotinamide, nicotinic acid) ↑	0.56 mg/100g	0.70 mg/100g
Cu (Copper)	3.61 mg/kg	3.47 mg/kg
Zn (Zinc) ↑	13.43 mg/kg	18.48 mg/kg
Fe (Iron) ↑	22.24 mg/kg	26.77 mg/kg
P (Phosphorus) ↑	201.95 mg/kg	254.51 mg/kg



When examining the table, there are great changes between the content of the flour before regulation and the content of the flour regulated in accordance with **Flour Statement dated April 2**.

The content of the fiber reached to a level of 4.50 g in 100g of flour by increasing approximately 30%. The fiber is important for our health by reducing the likelihood of many diseases as well as both it promotes the digestion and protects the health of our digestive system. **The magnesium value in new bread flour was increased by 50% compared to previous flour.** The magnesium having an important role in functioning of our muscular and nervous system and fat metabolism is very important for our body. **The vitamin contents in the flour that provides us with all group B vitamins except for B12 were increased in accordance with the new statement.** Group B vitamins play a significant role in the nervous system, regulation of hormones, immune system, digestive system, protecting the health of the skin and is the leading in vitamins essential for our health.

The content of the Zinc in the flour regulated in accordance with New Flour Statement was increased by approximately 40%. The zinc has an important role in regulation of immune system, promoting the quick healing of wounds and slowing down the aging process. **Also the contents of iron and phosphorus which are vitamins that are of great importance for our health were increased by 20% and 26% respectively in our new bread.** The phosphorus has a great importance for our body due to it is included in the structure of DNA the building block of our bodies and also our teeth and bones. Also the iron is needed for our health because it prevents anemia.

Furthermore, **the content of the salt (sodium) in bread flour was decreased by about 15% in accordance with New Flour Statement** since even a little change in the content of the salt in the bread will be important because we are a society that consumes the bread almost in every meal.



ANALYSIS	1.25% Cinder Whole Wheat Flour
* Energy 1	337 kcal/100g
* Humidity	13.05 g/100g
* Protein	10.89g/100 g (Nx5.70)
* Carbohydrate (2)	66.95g /100g
* Dietary Fiber	6.83g/100g
* Fat	1.33g/100g
Mg (Magnesium)	768.75 mg/kg
K (Potassium)	2366mg/kg
Na (Sodium)	30.13 mg/kg
Crude Fiber (Cellulose)	1.22%
Total Acidity (In dry matter)	0.07g/100g (In sulfuric acid)
Falling number	278
Sedimentation test	38 ml
Starch (with kit)	44.76
Modified sedimentation test	39 ml
* Vitamin A (Vitamin A Retinol)	2.68 µg/100 g
* Vitamin E (Alpha tocopherol)	0.71 mg/100g
* Vitamin B1 (thiamine)	0.33 mg/100g
* Vitamin B2 (riboflavin)	0.05 mg/100g
* Vitamin B6	0.17 mg/100g
* Niacin (nicotinamide, nicotinic acid)	0.60 mg/100g
Cu (Copper)	4.34 mg/kg
Zn (Zinc)	24.19 mg/kg
Fe (Iron)	38.66 mg/kg
P (Phosphorus)	550.11 mg/kg



The content of the filter of this bread described as whole wheat flour is more by 95% compared to previous bread flour. Therefore it is very rich in terms of the fiber. The content of the magnesium in the whole wheat bread flour prepared in accordance with New Statement was increased by almost twice and also the content of the potassium was increased by more than twice compared to previous bread flour. The increases are observed in group B vitamins and Copper compared to previous flour again. It was made into richer flour in terms of nutritional value by increasing the contents of Zinc, Iron and Phosphorus by approximately twice.



The content of the salt was decreased in the bread.



The content of the bran was increased in the bread.



The cinder content of the bread flour was increased and enriched in terms of mineral, vitamin and fiber. 17 good additives in the bread were removed.



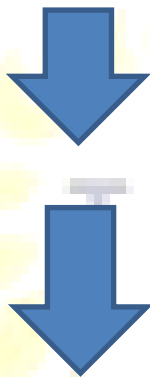
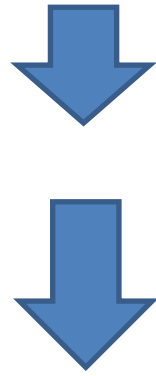
The salt content of the bread was decreased in accordance with Turkish Food Codex Bread and Bread Varieties Statement on January 4, 2012. Thereafter, contents of cinder, fiber, vitamin and mineral of the flour were increased by the Flour Statement published in the official gazette on April 2, 2013.

17 additives in our traditional bread were removed as from August 1, 2013 including process of passing by Turkish Food Codex Additives Regulation.



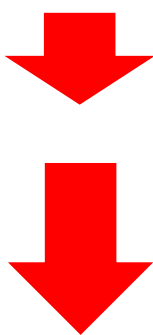
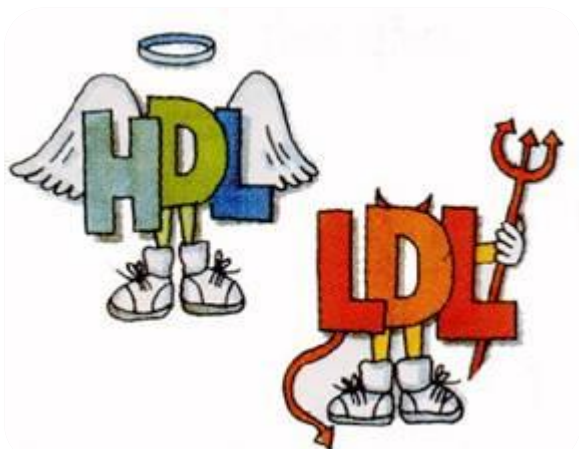
RESEARCHES ON BREAD

It was observed in a research carried out with 88.000 people by "**The Nurses' Health Study**" in America that traditional bread consumption **reduces the risk of Type-2 diabetes by 27%.**



It was observed that traditional bread consumption **reduces the risk of colon and gout cancer** as a result of a research carried out with 291.988 males and 197.623 females between 50-70 ages by **The American Cancer Institute "NIH-AARP Diet and Health Study"**.

It was understood that traditional bread consumption **reduces the mortality rate by 20% regardless of the age** as a result of a research carried out on 86.000 males by "**Harvard Male Health Professionals**".



It was observed that traditional bread **reduces the LDL known as "bad cholesterol" by the public and total cholesterol** as a result of a research carried out by "**Baltimore Longitudinal Study of Aging**" according to dietary reports.

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Trust and Consume the Natural Turkish Flour

*Turkish Flour:
An Inseparable Part of Daily Life*



*The Most Natural Flour is
Turkish Flour*

*We Feed 3,7 Billions of People
Around the World*

*Natural Turkish Flour for Healthy
Generations.*

*Turkish Flour: Quality, Safety, Natural
Right, Adequate & Healthy Nutrition.*



Now also our Flour

and Bread

more natural

more nutritious

and more delicious...



CONTACT:



Konrad Adenauer Caddesi 523. Sokak No: 1 / 2

Yıldız / Çankaya / ANKARA Office of Secretary General

Phone : 0 (312) 440 04 54

Fax : 0 (312) 440 03 64

E-mail : bilgi@tusaf.org

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