

Wheat is the basic food of the planet

The critical analysis of the untruth assertions of the author of the book named "Wheat: the silent killer"

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"There are people in the world so hungry, that God cannot appear to them except in the form of bread." Mahatma Gandhi

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Wheat is the basic food of the planet but the selection only contributes to this! *The written down in the present copy is provoked by the writings about the wheat in the book "Wheat: the silent killer" by the American cardiologist William Davis, "Intense" Publishing House, 2014. The wheat in this book is presented as a "poison", "drug", thanks to it the people "destroy their healthy" consuming it consistently. The scientists engaged in the lofty activity to improve the wheat to feed the humanity, are subject of untrue libels that they were worsen so much its nutrition property that they have transform it into "very injurious" food. In this copy general information is presented that*

*proves the especially nutrition property of the wheat estimated by the humanity more than 10 thousand years ago. A critical study was performed of the untruth statements made by the author of the book and enough expressive proves are submitted for these statements of ours. It is presented that the selection **has no guilty** about the healthy problems of the people.*

The wise saw **"Nobody is bigger than the bread"** is valid even in the present society of globalization and technologic stagger. *The wheat stays merit food regardless of the libels because 60% of the population of the developing countries rely on it.*

Wheat and health

Nowadays everybody knows that the consumers crave for higher transparency and trust for the feed "system" connected with the grain cultures especially the wheat. These fears are understandable in front of the health problems connected with the food that exists in the world during the years after the Second World War. The submitted facts are contra arguments to Dr. William Davis about his ATTACT AGAIST THE WHEAT SELECTION. They are formed on the numerous studies in specialized scientific literature about the wheat issued by famous and highly erudite scientists from all over the world. Opinions of two big group selectionists had been used: the scientists from the International Maize and Wheat Improvement Centre in Mexico which is created and financed by Food and Agriculture Organization and the National Wheat Improvement Committee in USA because of their the most scientific arguments. In the last mentioned all expressed scientists by USA have taken participation and are engaged in the improvement of the wheat as an agriculture cereal.

In 1960 the efforts in the wheat development, experimental lines and varieties were shared between the investigators from all over the world. During the next year the wheat production in China, India, Pakistan, Egypt has increased significantly and millions of people which other way probably should died of hunger or malnutrition, were in condition to live and to have food (Figure 1). Part of this production increasing (40%) depends on the technological improvement for wheat cultivation. Nowadays the main purpose of the wheat selectionists is to change it so as this ancient plant to continue to provide food to the growing fast population of the Planet. All agriculture growers have still relied to the selectionists to create precious varieties which are in condition to stand up against the steadily changing pests and diseases and anomalies in the climatic conditions recently.

Wheat: selection and science

The wheat that is cultivated all over the world today at 2.22 mlrd decares came from three types grain grasses which were cross-fertilized in nature, habitat centuries ago. Each of them may be cultivated separately but it is very primitive for cultivation. Related species of these grasses are cultivated in isolated regions over the world (very poor countries) and they are known to the general public as spelt "Triticum spelta". These wild species relative to the wheat are not a subject to scientific selection, because of its low yield and local meaning. By these reasons, they are not significantly changed during the last years when the Egypt pharaohs were lived (Figure 2)



During the last 70 years the selection of breadmaking wheat is concentrated over the natural changes of the plant created by the Nature thousands years ago and over natural mutations in results of different environmental conditions, culture spreading during the past centuries all over the world. There is no culture in the modern world among the grasses and the garden flowers to the wheat, maize and the rice which is the same as those when the Earth was created, not even the conditions of their cultivation are the same as those centuries ago, when every plant came into being.

There is no mystery in the wheat selection. The selectionists use two basic methods that are not changed for the creation of new varieties.

1. Traditionally simple cross-fertilization that includes combination between the available genes from different parents for new genetic combinations (not new genes) in the generation. This can explain why a higher yield potential is received or similar to the used parents tolerance against diseases and enemies, property, etc.

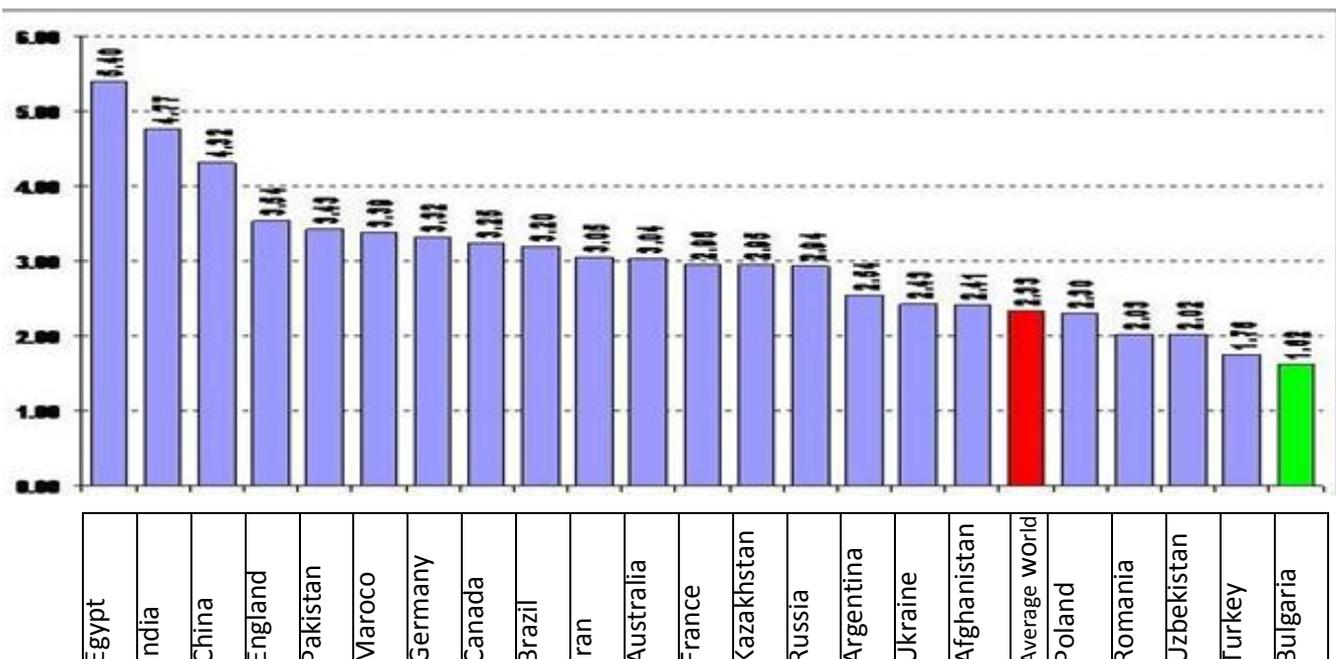


Figure 1. Wheat yield increasing (at times) in 2015 comparing to 1970.

2. The second method is the entering valuable genes (for tolerance against diseases) from similar of the wheat wild species in the wheat by their gradually inserting in other varieties breadmaking wheat with minimum participation of the wild species DNA (usually

It is very important to understand that both methods are based on the cross-fertilization between the species by which the genealogy of the current breadmaking wheat and other wheat species has been discovered Thousands modern methods are applied to the selection which does not change the two principles set forth.

The applied below facts have the purpose to comment and demonstrate the untenability of Mr. Davis MD statements about the "negative" effect of the selectionists over the wheat as a plant and its nutrition properties.

STATEMENT 1: All wheat is the same (equally harmful)

The wheat can be cultivated in various conditions of the environment so as many different applications of the grain because of its great genetic diversity. It is a result from the ABD genome. The wheat has a great morphological diversity which allows it to be cultivated in contrasting conditions all over the country. To be useful, the wheat can be with high plant in regions with minimum rainfalls or with low fertility. The lowest plants contrary are used before the current selection at generous soils and heavy rainfalls. The natural forms of breadmaking wheat are considerably different by grain property, a quality which is the most important for the wheat grain. This difference in the property (protein ingredient) has provoked the people to use it in different purposes. The breadmaking products that have become traditional centuries ago in the different geographic regions in the world, are unbreakable connected to the quality of the local wheat. The broad range of unique protein structure of the grain is thus that makes the wheat flour different. The variation in the range of the culture is a reason for the existing of different wheat ears (species) according to quantity and property of the gluten. The last mentioned is a subject of special attention because in some of the grain plants (spelt varieties) is less and it is more acceptable for diet of people with specific healthy problems (coeliac disease). The special think at the wheat is that the quantity and the property of the protein vary very much during every separate season depending directly on the conditions of the environment. In this connection the wheat selection has different purposes regarding the protein and gluten, and they are in direct connection with the tradition preferences of the population in particular region.

STATEMENT 2: "Fourteen new gluten proteins have been settled in the wheat that do not exist in some of the grandparents of the wheat plant

The popular cultivated wheat varieties in the world are a result mainly of classic intervariety hybridization not to somatical hybridization of cell fusion (GMO's transformations) as it written in the said book. The conventional selection with gluten proteins that only recombined themselves from those which exists in the parents during cross-fertilization. The plants can form these proteins in the grain only for which they have a genetic code (DNA) of yield. The environmental conditions may provoke synthesis or to oppress the act of exact proteins but they cannot "figure out" forming of "new" proteins for which there is no genetic information in the initial varieties. A great forms diversity of the wheat gluten exists in the nature. The different combinations between these protein varieties (species) may provoke different act of it's composition as a property. This is a result from many genetic factors in the chromosome that after their combining unique properties have been received. It must be well known that they do not come out the boundaries of wheat diversity as a plant. This is the reason in some conditions,

factors (understand genes) to be accumulated for “qualitative” protein in the grain (Russia, Canada) but in others such protein, that is not possible to bake a normal bread “low qualitative” (Pakistan, England). Because of these biological reasons the geographic (genetically) different initial forms are combined to change the grain property depending on the direct purpose for its traditional use.

STATEMENT 3: There is “new” protein called Gliadin in the current wheat

The proteins that are preserved in the grain consist of near 100 different components. One of the component groups is called Gliadin, which is discovered and isolated by the scientists more than 100 years ago. (figure 3).

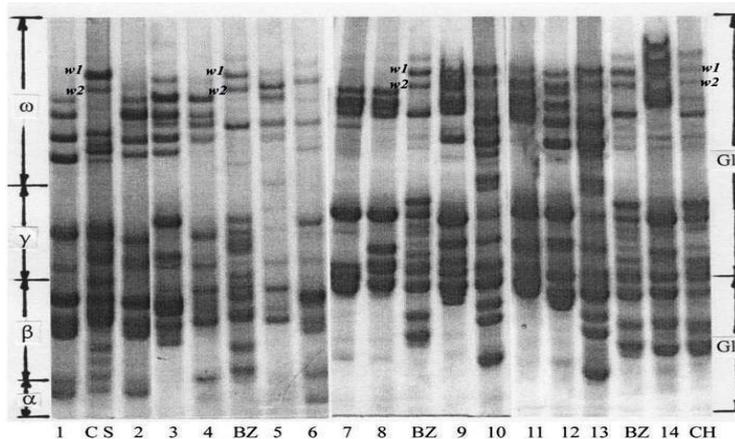


Figure 3. The great diversity of Gliadins in the wheat grain is not from yesterday.

Gliadin is the name of one of the proteins in the grain which exists in other grain cultures as rye and barley. The Gliadin proteins are not “new”. They have always been a part of the protein and by this they are "relatives" with the wild varieties from which the current wheat comes from. An incontestable fact is that in the gluten as protein, great nature diversity exists. As a whole, the current wheat has lower gluten quantity (Gliadin+Glutenin) but with better functional proportion between them from the historical wheat. This different proportion between Gliadinins and Glutenins is the reason for the different property of the grain against the environmental conditions. This is a precondition for the selection regarding the property of the grain where the life requires it.