

Modern Wheat is Nutritionally Similar to Ancient Wheat

1. *Scientific research shows that the grain composition of wheat grown today in Canada is very similar to wheat grown more than 100 years ago:*
 - *The protein concentration is similar*
 - *The polymeric (or gluten containing proteins) are similar*
 - *The quality of the protein is similar*
2. *There is no scientific research to support the claim that wheat varieties developed during recent decades are responsible for increased incidences of obesity, diabetes and other lifestyle related health conditions in our society.*
3. *Wheat is an essential part of the diet for people in most parts of the world. Wheat provides more nourishment for humans than any other food source. Wheat is made up of both carbohydrates and protein and is rich in a number of vitamins and minerals, dietary fibre, anti-oxidants and phytochemicals.*

New research soon to be published in the peer reviewed journal Cereal Chemistry shows that the nutritional composition of modern wheat is similar to wheat grown in Canada 150 years ago.

The discovery refutes claims that the protein composition of the grain, which includes gluten, has been fundamentally altered by the agriculture industry. The research shows that while the increase in grain yields over the past century has been significant, the increases in the total grain protein concentration, including gluten, in wheat grain, has been very modest (~1%). Hence, the overall nutritional quality and composition of wheat grain over time has seen little change.

The research was led by Dr. Ravindra Chibbar and Dr. Pierre Hucl at the University of Saskatchewan.

These researchers took seeds from 37 varieties of wheat representing grain from each decade from the 1860s onwards, grew the wheat and compared the nutritional composition against modern Canada Western Red Spring (CWRS) varieties in field trials over 2013 and 2014.

The research team analyzed the concentration of starches and proteins including gluten. What they found is that wheat grain today has a very similar nutritional composition to wheat grown more than 150 years ago.

“Our results substantiate that the wheat grown by Canadian farmers today is nutritionally similar to wheat grown in 1860,” says Dr. Chibbar. “There is no evidence to suggest that the increased incidences of obesity, diabetes or other health conditions in today’s society are related to the wheat varieties developed during the recent decades as claimed by some critics.”

CWRS wheat makes up the majority of all wheat grown in Canada. Wheat contains both carbohydrates and protein and is rich in a number of vitamins and minerals, dietary fibre, anti-oxidants and phytochemicals. It has been a staple and essential part of the human diet for thousands of years, and because of the unique properties of its gluten protein, is used in countless ways to make breads, pastas and a variety of other foods.

The University of Saskatchewan, Saskatchewan Ministry of Agriculture and Food, Saskatchewan Wheat Pool and the Canada Research Chairs program funded the research.

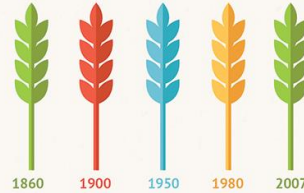
Dr. Ravindra (Ravi) Chibbar, Ph.D. is a professor and Canada Research Chair, Crop Quality (Molecular Biology & Genetics), Department of Plant Sciences, College of Agriculture and Bioresources at the University of Saskatchewan and sits on the Scientific Advisory Council for The Healthy Grains Institute (HGI).

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Please visit <http://www.healthygrains.ca/> for more information.

MODERN WHEAT IS NUTRITIONALLY SIMILAR TO ANCIENT WHEAT

SCIENTIFIC DATA COUNTERS CRITICS' CLAIMS THAT MODERN WHEAT HAS CHANGED



Research shows that the nutritional composition of **MODERN WHEAT IS REMARKABLY SIMILAR TO WHEAT GROWN IN CANADA IN THE 1860S.**

37 VARIETIES OF WHEAT from every decade since the 1860s were compared. **THE RESULT? WHEAT CURRENTLY GROWN BY CANADIAN FARMERS IS JUST AS NUTRITIOUS AS IT WAS 150 YEARS AGO!**



There has been an increase in wheat yield in the past century **WHICH IS IMPORTANT TO FEEDING THE WORLD'S GROWING POPULATION.**



THERE HAS BEEN VERY LITTLE CHANGE IN THE GLUTEN AND PROTEIN CONTENT OF THE WHEAT GRAIN (~1%).



WHAT IS GLUTEN?

It's the one of the natural proteins found in foods such as wheat, rye and barley.



Over time,

THE NUTRITIONAL QUALITY AND COMPOSITION

of wheat grain has remained similar.



WHEAT CAN BE PART OF A NUTRITIOUS, HEALTHY, AND BALANCED DIET It's packed with the same fibre, vitamins and minerals that made your grandparents strong. There are **PLENTY OF BENEFITS TO WHEAT.**



WHEAT IS FOUND IN: bread, pasta, couscous, wheat berries and bulgur, to name a few.

For more information, visit www.healthygrains.ca

HEALTHY GRAINS
INSTITUTE

References:

1. [<http://cerealchemistry.aacnet.org/doi/abs/10.1094/CCHEM-02-15-0029-R>] and Presented at the 2015 Canadian Nutrition Society Meeting
2. healthygrains.ca/resources/factsheets/gluten-free