



THE LATEST I2S BRIEF: HEALTH & NUTRITION™

i2s

# A NEW FRONTIER IN FIBER

New research reveals opportunities to meet consumer demand for fiber—in more products than ever before.

*This brief offers a snapshot of the market for fiber, including consumer attitudes and purchasing trends. And it looks at the latest research on the health benefits of fiber and formulation opportunities with fiber ingredients.*

Ingredion

idea labs™

IDEAS TO SOLUTIONS

i2s





# THE DEMAND FOR FIBER **IS HUGE**

Consumers can't get enough. Are they getting fiber from your products?

HEALTH & NUTRITION™ 

Ingredion  
**idea labs**™   
IDEAS TO SOLUTIONS



# FIBER: IT'S WHAT THEY WANT. HERE'S WHAT WE KNOW.

## Consumers are **interested in fiber**

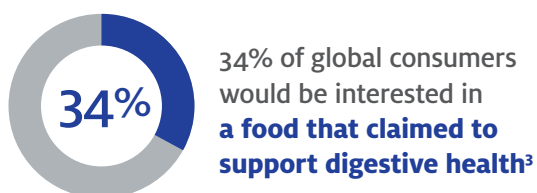
When standing in the grocery aisle, consumers are increasingly looking for fiber, and a significant number of consumers purchase products because they contain fiber.



Although the percentage of people who report purchasing high-fiber foods and beverages is high, there is still some distance to make up between those who report being interested, and those who are strongly influenced by high-fiber label claims to make purchases.

## The health benefits of fiber are highly desired

Fiber is rightly perceived as a tool that can help move consumers toward their health and wellness goals.



Studies have shown the effects of fibers in inducing satiety and reducing hunger after consumption. The caloric content of fiber is also much lower than that of other carbohydrates, so it can partially replace sugar, flour and other carbohydrates.

## Fiber is at a premium

**23%** of consumers have **increased their use of fiber** in the past two years<sup>1</sup>



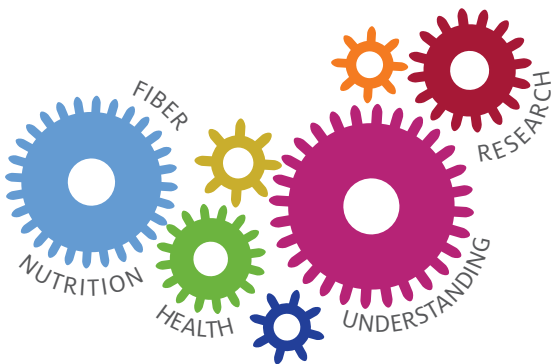
**14%** of consumers are **willing to pay 10%–15% more** for added fiber<sup>1</sup>



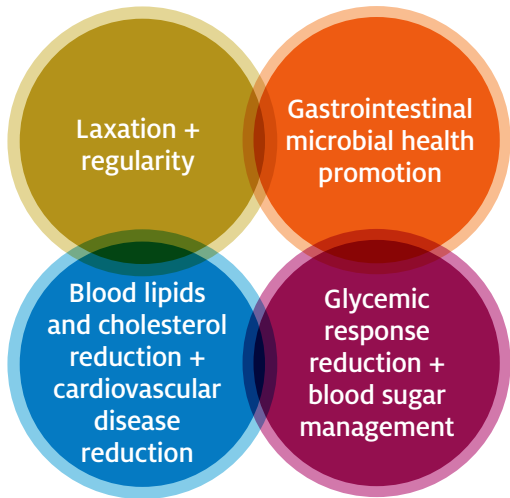
# FIBER 101: UNDERSTANDING THE BENEFITS OF FIBER

## Knowledge of fiber **is evolving**

Spurred by increased consumer interest in nutritional benefits from foods and beverages, clinical research has greatly expanded understanding of the relationship between fiber and health in the past decade.



Fiber has been shown to have **beneficial impacts on many areas of health, including:**



## Not all fibers **are equal**



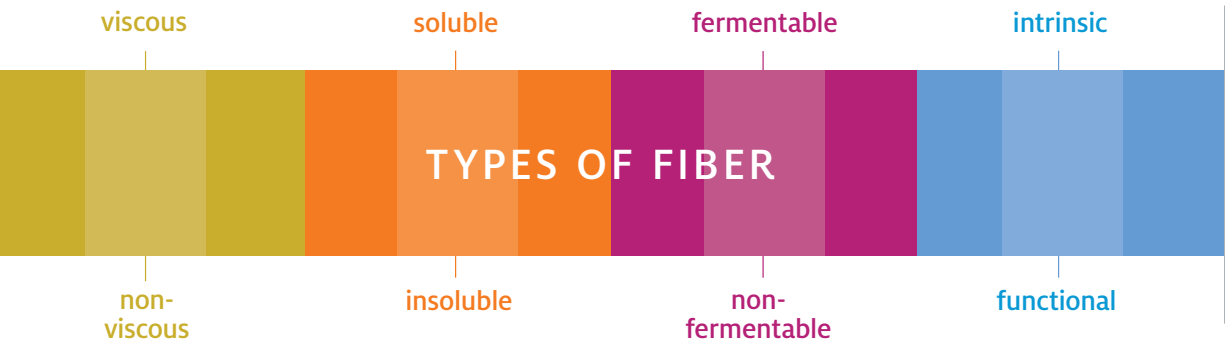
Scientists are coming to understand that different fibers have different physiological effects—this is a monumental change from the early understanding of fiber.



**“soluble” + “insoluble”**

are the most commonly used terms to describe fiber, but these terms do not adequately capture the complexity of the fiber spectrum.

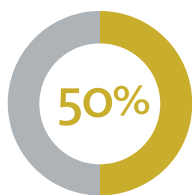
## The complete spectrum **of fiber**



# FORMULATE FOR SUCCESS

## The fiber gap: a golden opportunity

Despite overwhelmingly positive attitudes toward fiber, actual intake still falls short of daily recommendations. In fact, the 2015–2020 Dietary Guidelines for Americans indicate that dietary fiber is an “underconsumed” nutrient and recommend Americans increase their intakes to reduce the risk of potential health concerns.



Adults currently consume only 50% of the Institute of Medicine's daily fiber recommendation<sup>6</sup>



Consumers rank bread, nutrition bars and snacks as the most important categories when it comes to getting fiber<sup>7</sup>



1 of 3 consumers report having difficulty finding higher-fiber breads<sup>7</sup>



45% of consumers report difficulty finding high-fiber snacks and bars<sup>7</sup>

Product categories that are commonly high in fiber are still not meeting consumer demand—or aren't labeled clearly enough.

1. 2016 HealthFocus USA, Trend Study  
2. HealthFocus International, 2017  
3. Mintel GNPD  
4. HealthFocus International, 2014  
5. Ingredient proprietary energy study, 2015  
6. 2015–2020 Dietary Guidelines for Americans  
7. Pulses research, Ingredient proprietary, September 2015

## Fiber in every aisle

How can you offer consumers the nutrition they want—and need—in products they'll love to buy? Consumers increasingly expect to obtain higher fiber from a wider range of foods and beverages. Fortunately, over the past few years, innovation in fiber ingredients and product development has broadened the scope of what you can offer.

### Leading-edge ingredient technology has enabled the development of fibers with

- smaller molecular weight
- enhanced solubility
- and better process versatility



### TRADITIONAL



BREADS



CEREALS



SNACKS  
AND BARS



SUPPLEMENTS

Although breads, cereals and bars remain crucial to the high-fiber market, an expanded range of fiber-enriched products is now within reach and may help to close the consumer fiber gap.

### NEW



SMOOTHIES



DAIRY  
PRODUCTS



BEVERAGES



AND MORE

Some soluble fibers can now be used in food systems with barely any discernible impact on food quality—further enabling you to expand your product offerings or enrich the fiber of products you currently offer with no loss of appeal.

# A BROAD PORTFOLIO OF FIBER SOLUTIONS TO MEET GROWING CONSUMER DEMAND

Whatever your application, Ingredion offers an ingredient solution that will help you meet increasing consumer demand for fiber:

## **NUTRAFLORA® prebiotic fiber**

- Highly effective at low doses
- Promotes growth of beneficial bacteria
- Enables partial sugar replacement

## **VERSAFIBE™ dietary fiber**

- Insoluble fiber that can be used in a wide range of applications
- Can enable “excellent source of fiber” claims
- Allows for caloric reduction
- Little or no impact on taste, color or texture

## **HI-MAIZE® resistant starch**

- Natural starch with high fiber content for labeling purposes
- Enables flour replacement and caloric reduction in baked goods
- Supports balanced energy, weight management, healthy blood sugar and improved metabolism

## **BIOLIGO™ GL IMF galactooligosaccharides**

- Supports immune and digestive health
- Promotes the growth of healthy bacteria

## **Make high-fiber products your bread and butter with Ingredion Idea Labs™ science-based problem solving**

Proprietary research shows that you have many challenges when choosing and using fiber ingredients, from formulating to supporting claims and regulations.\* Ingredion can help.

- Through the Nutrition Science and Clinical Program, the Ingredion Idea Labs™ Team conducts and sponsors clinical trials to identify and support health benefit claims for our novel and proprietary ingredients.
- We offer insights into consumer health concerns and regulatory expertise.
- Our deep CULINOLOGY® sensory and application expertise helps you quickly optimize the eating experience as you incorporate fiber ingredients into your products.
- The 27 Ingredion Idea Labs™ innovation centers around the globe offer science-based problem solving to help you differentiate your high-fiber products and get them to market faster—with greater consumer acceptance and profitability.

Today’s savvy, informed consumers demand high-quality, convenient foods and beverages that deliver enhanced fiber with proven effects. When you collaborate Ingredion, your greatest challenges can become your most lucrative opportunities.

*Not all ingredient solutions available in all regions.*

## **Innovate with HEALTH & NUTRITION**

[ingredion.us/fiber](http://ingredion.us/fiber)

**1-800-713-0208**

Ingredion  
**idea labs**   
IDEAS TO SOLUTIONS



\*Clear Seas, 2013

The INGREDION, INGREDION IDEA LABS, BIOLIGO, HI-MAIZE, NUTRAFLORA and VERSAFIBE marks and logos are trademarks of the Ingredion group of companies. All rights reserved. All contents copyright © 2016.

CULINOLOGY is a registered trademark of the Research Chefs Association. Used with permission.