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FIBER FORWARD

UNLOCKING FIBER FUNCTIONALITY WITHOUT COMPROMISING TEXTURE, FLAVOR, OR PROCESSABILITY

By Heidi Clark, Director of Business Development & Innovation, MicroDried

Fiber is taking on a new role in modern food formulation. Once treated primarily as a digestive health ingredient, it is now part of a broader conversation around satiety, metabolic health, clean label formulation, and "positive nutrition". At the same time, formulators continue to face a familiar challenge: many traditional fiber systems can create tradeoffs in texture, flavor, and processing. A more integrated approach is emerging, one that delivers fiber through **whole food ingredients and functional formats** rather than isolated fortification.

ONLY 5% **of U.S. adults meet the recommended daily fiber intake levels.**
A gap that continues to shape how formulators think about fiber in product development.
Source: U.S. Department of Agriculture and U.S. Department of Health and Human Services.

SHIFT/PROBLEM: FROM **FIBER FORTIFICATION** TO **WHOLE FOOD FUNCTIONALITY**

Consumer expectations around fiber have evolved. While digestive health remains relevant, fiber is increasingly associated with **satiety, blood sugar management, weight management**, and more balanced nutrition. This shift is pushing developers to think beyond added fiber claims and toward ingredients that deliver intrinsic nutrition along with product appeal.

The challenge is that fiber has historically been one of the more difficult components to incorporate effectively. Traditional fiber systems can introduce grittiness, dryness, density, moisture management challenges, off-notes, and processing complications. In many applications, achieving fiber targets has meant accepting compromises elsewhere in the formulation.

IMPLICATION/CHALLENGE: **WHY FORMAT MATTERS** AS MUCH AS **INGREDIENT SELECTION**

A growing number of developers are moving toward a different model that delivers fiber through whole food ingredients rather than relying on isolated additives. **Fruits and vegetables** naturally bring fiber along with flavor, color, and other nutritional attributes. But ingredient choice alone is not enough. In application, performance depends on the format.

Whole food ingredients can still underperform if they introduce excess moisture, break down during processing, or fail to integrate cleanly into the system. That is why format becomes critical. The most effective ingredient systems are designed to **support low water activity**, flowability, durability through processing, piece identity, and uniform distribution. When these attributes are aligned, fiber becomes an asset rather than a challenge.

KEY TAKEAWAY

Fiber success is not just about how much fiber an ingredient contains. It is about how that ingredient behaves in the system: how it handles moisture, how it processes, and how it contributes to texture, flavor, and visual appeal.



PRACTICAL TAKEAWAY/APPLICATION:

RETHINKING FIBER FOR **MODERN APPLICATIONS**

The shift toward intrinsic fiber systems is creating new opportunities across cereals, granola, bars, snack mixes, and other low-moisture systems. In these applications, developers are looking for ingredients that do more than contribute nutritional value. They need ingredients that help maintain structure, support sensory quality, and integrate more cleanly into the manufacturing process.

Application opportunities include:

- **CEREAL & GRANOLA:** Fiber delivered through fruit particulates and inclusions can help maintain crunch and structural integrity while enhancing visual appeal and perceived value.
- **BARS & FUNCTIONAL SNACKS:** Fiber systems can reduce reliance on syrups and binders, support structure without excess moisture, and provide natural sweetness and fiber simultaneously.
- **SNACK MIXES & BFY INDULGENCE:** These ingredients can add texture contrast and visual interest, while supporting real-ingredient positioning and "permissible indulgence" narratives.
- **DAIRY-ADJACENT & HYBRID NUTRITION SYSTEMS:** Fiber-rich fruit and vegetable ingredients can be combined with protein-based dairy inclusions to create balanced nutrition systems and new formats.

Whole food fiber systems can help address several needs at once. They can deliver naturally occurring fiber while also contributing flavor, color, texture, and improved consumer perception. In optimized formats, they support stability, handling, and piece identity through mixing, forming, and finished product use. This opens the door to a more balanced formulation approach that reduces the gap between nutritional goals and product performance.



FIBER + PROTEIN: A CONVERGING OPPORTUNITY

Interest in fiber is increasingly overlapping with demand for protein. As formulators look for products that support fullness, sustained energy, weight management, and balanced nutrition, there is a growing opportunity to combine fiber-rich fruit and vegetable systems with protein-based components. In the right format, these combinations can contribute both nutritional value and a more layered sensory experience.

As formulators rethink how fiber is delivered, format becomes an important part of the equation. The goal is no longer simply to add fiber, but to do so in ways that support texture, flavor, and application performance. That perspective continues to shape MicroDried's work with fruit, vegetable, and dairy ingredients.



ABOUT THE AUTHOR

Heidi Clark is Director of Business Development & Innovation at MicroDried, where she leads revenue growth, product strategy, and customer-driven innovation across fruit, vegetable, and dairy ingredient platforms. She works closely with customers to translate emerging trends into scalable, high-performing food systems.

ABOUT MICRODRIED

MicroDried delivers fruit, vegetable, and dairy ingredient systems designed for modern food formulation. Through proprietary drying technology, MicroDried ingredients maintain structure, color, and flavor while offering low water activity, flowability, and durability in processing. These attributes support seamless integration into low-moisture systems such as cereals, bars, snacks, and inclusions.