



Health Benefit Sand Functionality of Food Barley as an Ingredient

Natsuki Fujiwara

Food Technologist

Northern Crops Institute (NCI)

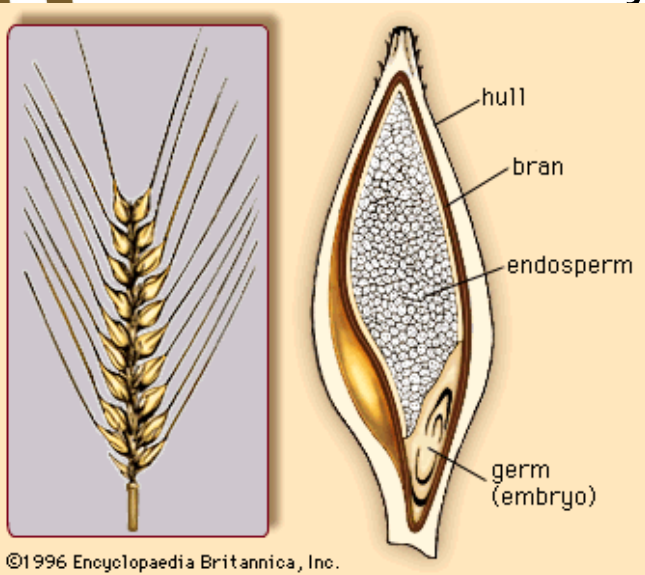
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Food barley as a whole grain and its health benefit

- β -glucan in Barley is a primary component that provides the health benefit of food barley.
- Waxy-hulless barley does not have **hull** thus can be used without pearling process.
- Barley is higher in both total fiber and soluble fiber than oats or rye.



» β -glucan in barley is spread throughout the kernel so pearling process does not affect the amount of β -glucan obtained.



Functional Characteristics of Barley

1. Increased **water absorption**.
 - Fiber absorbs more water.
2. Barley flour provides **higher volume**.
3. Improves **flavor** characteristics.
4. Affect **loaf volume** of bread product.
 - Lower in gluten. Baking supplement is needed.
5. β -glucan provides **higher viscosity**.



Applications in food include but not limited to..

- *Baked products*
- *Cereal products* – cereal bars, protein bars
- *Extruded products* – puff snacks, RTE breakfast cereals
- *Pasta or noodles*
- *Rice replacer*
- *Tea and beverages*



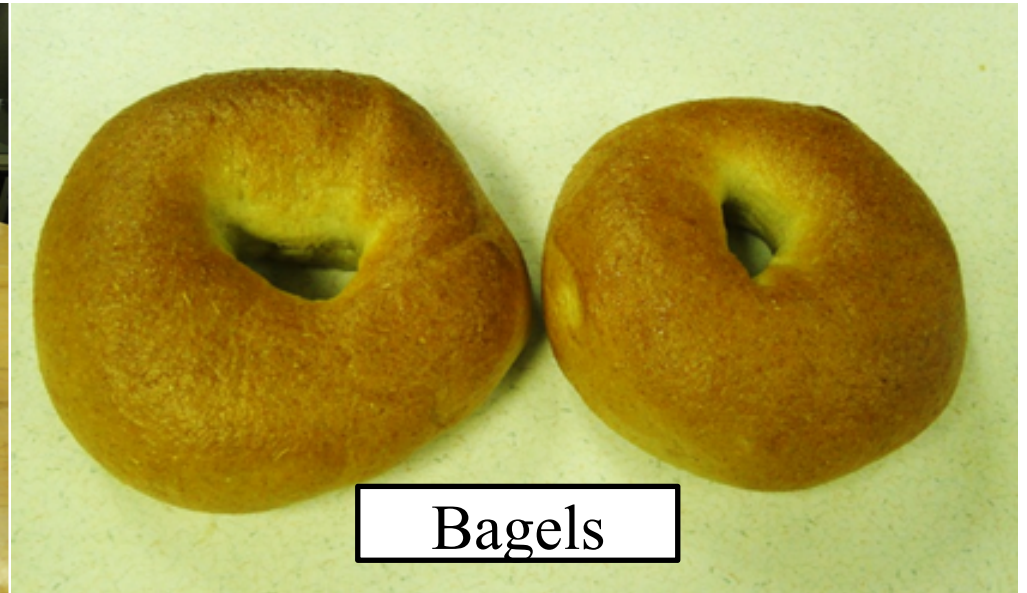


Baked Products with Hulless Barley



Control

Barley



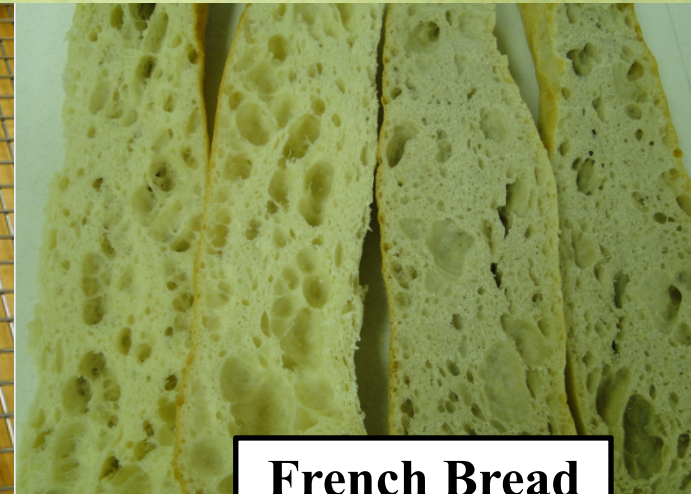
Bagels



90% Barley Cupcake



100% Barley Cookies



French Bread