

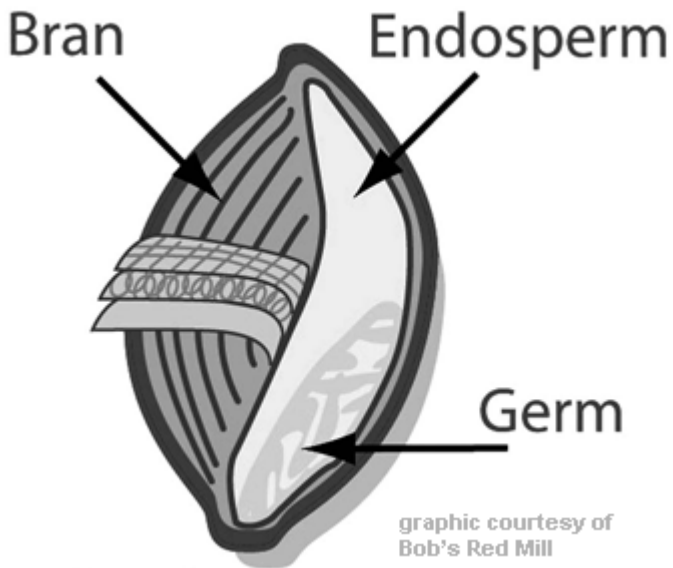






From:

<http://www.wholegrainscouncil.org/Consumer%20Guide.html>



The **bran** is the multi-layered outer skin of the kernel, and is tough enough to protect the other two parts of the kernel from assaults by sunlight, pests, water, and disease. It contains important antioxidants, B vitamins and fiber.

The **germ** is the embryo which, if fertilized by pollen, will sprout into a new plant. It contains many B vitamins, some protein, minerals, and healthy fats.

The **endosperm** is the germ's food supply, which provides essential energy to the young plant so it can send roots down for water and nutrients, and send sprouts up for sunlight's photosynthesizing power. The endosperm is by far the largest portion of the kernel. It contains starchy carbohydrates, proteins and small amounts of vitamins and minerals.

Whole grains contain all three parts of the kernel. Refining normally removes the bran and the germ, leaving only the endosperm. Without the bran and germ, about 25% of a grain's protein is lost, along with at least seventeen key nutrients. Processors add back some vitamins and minerals to enrich refined grains, so refined products still contribute valuable nutrients. But whole grains are healthier, providing more protein, more fiber and many important vitamins and minerals.