

WHOLE GRAINS

Educator | VermontHarvestoftheMonth.org

Harvest of the Month provides resources for the cafeteria, classroom, and community to promote the use of local, seasonal foods.

History of Grains

A grain is the edible seed inside a cereal crop. These grains are comprised of four parts: the husk, the bran, the endosperm and the germ. The husk is inedible and has to be removed before it can be consumed. The bran is a thick inner covering that is made up of several layers. The germ is the part of the grain that produces the sprout for a new plant to grow, and the endosperm is the soft inner part of the grain that provides nourishment for the seed after it is germinated. A whole grain is one with all these components except the husk, if the grain no longer has the bran or germ there will be a loss of nutrients. Whole grains are known to be one of the earliest crops cultivated by humans. Grains have been consumed by humans and animals across the world as far back as 9000 B.C.E due to their high fiber and natural compounds that provide many health benefits. Humans use whole grains for bread, cereal, chips, pasta and stew.

Fun Facts

- Popcorn is a whole grain but there is only one variety of corn that can “pop”, this variety is called *Zea mays everta*.
- Quinoa [keen-waa], is a whole grain that goes back to the ancient Incan civilizations and was so important they called it the “gold of the incas”.
- Rice does not need to be planted in water but because it has a high tolerance to moisture it is planted in water to control weed and pests.

Reading Corner

Children's Books

- » *One Grain of Rice*, by Demi
- » *From Wheat to Bread*, by Bridget Heos



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Benefits

Whole grains fiber, protein, carbohydrates, vitamins and minerals like B & E vitamins, magnesium and iron in higher levels than refined grain.

Whole grains also reduce risks of heart disease, stroke, cancers, diabetes, and obesity if consumed in proper portions.

Varieties

There are many different varieties of whole grains, some of the most common are: barley, buckwheat, chia, corn, flaxseed, oats, quinoa, rye, whole wheat and rice.



CLASSROOM CONNECTIONS

Whole grain labeling sheet

Materials:

Printed sheet of different whole grain kernel images
(enough for class)

Markers

Directions:

- Give each student a kernels sheet
- Have the students label the variety of kernel and color the four different part of a grain kernel
- Discuss why whole grains have more nutrition than refined grains

Whole grain product activity

Supplies needed:

Multiple whole grain products
(cereal, bread, crackers, cornships, etc.)

Multiple non-whole grain products
(cereal, bread, crackers, cornchips, etc.)

Directions:

- Place each group of products on separate desks
- Have students pick the same or similar products from each table and compare the nutritional facts and ingredients of each product
- Discuss why it is important to eat whole grain products and the nutrients that make us healthy

