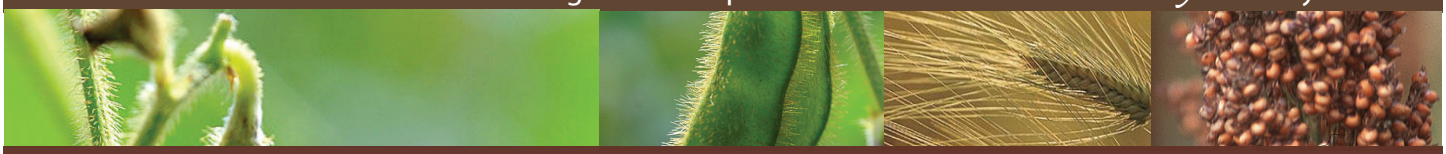

WHEAT GRASS

(Triticum aestivum)

General Information - Claims about wheatgrass' health benefits range from providing supplemental nutrition to having unique curative properties. Some consumers grow and juice wheatgrass in their homes. Wheatgrass juice is one of the best sources of living chlorophyll available. Chlorophyll is the natural plant pigment that lends its color to grass, leaves, and many of the vegetables we eat, and may play an important role in prevention of certain cancers. It contains most of the vitamins and minerals needed for human maintenance, including the elusive vitamin B12.

History - Wheat grass can be traced back in history over 5000 years, to ancient Egypt and perhaps even early Mesopotamian civilizations. It is purported that ancient Egyptians found sacred the young leafy blades of wheat and prized them for their positive affect on their health and vitality.

More recently, the consumption of wheatgrass in the Western world began in the 1930s as a result of experiments by Charles F. Schnabel and his attempts to popularize the plant. Schnabel, an agricultural chemist, conducted his first experiments with young grasses in 1930, when he used fresh cut grass in an attempt to nurse dying chickens back to health. The hens not only recovered, but they produced eggs at a higher rate than healthy hens. Encouraged by his results, he began drying and powdering grass for his family and neighbors to supplement their diets. The following year, Schnabel reproduced his experiment and achieved the same results. Hens consuming rations supplemented with grass doubled their egg production. Schnabel started promoting his discovery to feed mills, chemist and the food industry. Two large corporations, Quaker Oats and American Diaries Inc., invested millions of dollars in further research, development and production of products for animals and humans. By 1940, cans of Schnabel's powdered grass were on sale in major drug stores throughout the United States and Canada. Sometime during the 1940's a lady by the name of Ann Wigmore healed herself of cancer from the weeds she found in vacant lots in Boston. She began a study of natural healing modalities—and with the help of a friend, Dr. Earp Thomas, she found that there are 4700 varieties of grass in the world and all are good for man. With the help of her pets, she arrived at the conclusion that wheatgrass was the best-—or the medicinal grass.

Health Benefits - Wheat grass is believed to have many unexplained natural healing qualities. Many of the phytonutrients (plant nutrients) contained in cereal grasses have yet to be identified and it is not completely known how they provide such great benefits to our health. Wheat Grass is one of the most alkaline green leafy vegetables known and part of the cereal grass family, which includes barley grass, oat grass and rye grass. Wheat grass is a potent, convenient and affordable way to get your daily quota of 5 to 9 servings of fruits and vegetables. Each serving wheat grass is packed full of vitamins, minerals, enzymes, amino acids, phytonutrients and carotenoids to promote optimal health.

Proponents of wheatgrass claim regula

- improve the digestive system
- treats constipation
- believed to prevent some can
- detoxify heavy metals from t
- cleanse the liver
- prevent hair loss
- promotes general well-being

Medicinal Benefits - The green liquid extracted from sprouted grain is high in vitamins A, B, C, and E, as well as many amino acids, such as lysine, tryptophane, and phenylalanine. Wheatgrass is 70% chlorophyll.

Citations

"All about Wheatgrass and wheatgrass therapy", <http://www.drwheatgrass.com/wheatgrass/Default.htm>

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AMARANTH GRAIN

(Amaranthus hypochondrim aestivum)

General Information - Amaranth is a healthy, nutritious grain. It can be cooked as a cereal, ground into flour, popped like popcorn, sprouted, or toasted. The seeds can be cooked with other whole grains, added to stir-fry or to soups and stews as a nutrient dense thickening agent.

History - Amaranth was a staple in the diets of pre-Columbian Aztecs, who believed it had supernatural powers and incorporated it into their religious ceremonies. Before the Spanish conquest in 1519, amaranth was associated with human sacrifice and the Aztec women made a mixture of ground amaranth seed, honey or human blood then shaped this mixture into idols that were eaten ceremoniously. Amaranth is used in various cultures in some very interesting ways. In Mexico it is popped and mixed with a sugar solution to make a confection called "alegria" (happiness), and milled and roasted amaranth seed is used to create a traditional Mexican drink called "atole."

The name amaranth comes from the Greek meaning of "never-fading flower." The plant is an annual herb, not a "true" grain and is a relative of pigweed, a common wild plant also known as lamb's-quarters, as well as the garden plant we know as Cockscomb. There are approximately 60 species of amaranth and there is no definite distinction between amaranth grown for the leaf (vegetable), and the seed (grain).

Nutritional Benefits - It provides a good source of dietary fiber and dietary minerals such as iron, potassium, magnesium, phosphorus, copper, and especially manganese. It has more iron, potassium, phosphorous and magnesium than any other grain. Combined with corn or wheat flour, it makes "almost" a perfect protein.

Medical Claims - Amaranth seed is high in protein and contains respectable amounts of lysine and methionine, two essential amino acids that are not frequently found in grains. In fact the lysine level contained in amaranth are twice the amount of lysine found in wheat and 3 times the amount as that found in corn. Several studies have shown that like oats, amaranth seed or oil may be of benefit for those with hypertension and cardiovascular disease; regular consumption reduces blood pressure and cholesterol levels, while improving antioxidant status and some immune parameters. Amaranth appears to lower cholesterol via its content of plant stanols and squalene.

OATS

(Avena sativa and A. byzantina)

General Information - Like barley, have a hard outer hull that must be removed before it's ready for human consumption. Even though the outer hull of an oat kernel comes off easier than a barley kernel's hull, it's still not within reach of the average consumer to accomplish this. For this reason, if you want whole oats to eat, purchase them already hulled. Hulled oats, called oat groats, look very much like rye or Triticale.

Oats, known scientifically as Avena sativa, are a hardy cereal grain able to withstand poor soil conditions in which other crops are unable to thrive. Oats gain part of their distinctive flavor from the roasting process that they undergo after being harvested and cleaned. Although oats are then hulled, this process does not strip away their bran and germ allowing them to retain a concentrated source of their fiber and nutrients.

Health Benefits - It helps lower cholesterol levels, unique oat antioxidants reduce risk of cardiovascular disease, and substantially lower Type 2 Diabetes risk. Antioxidant Benefits- In addition to its fiber benefits, oats are also a very good source of selenium. A necessary co-factor of the important antioxidant, glutathione peroxidase, selenium works with vitamin E in numerous vital antioxidant systems throughout the body. These powerful antioxidant actions make selenium helpful in decreasing asthma symptoms and in the prevention of heart disease. In addition, selenium is involved in DNA repair and is associated with a reduced risk for cancer, especially colon cancer.

Citations:

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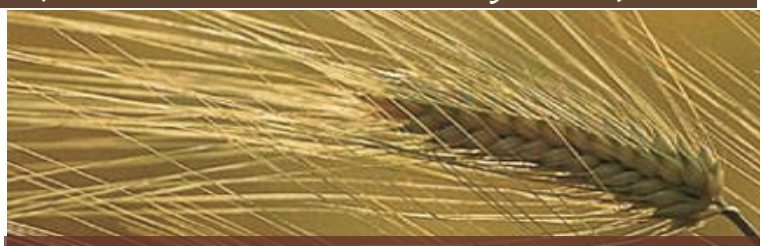

WHOLE GRAINS

A whole grain consists of three parts – bran, germ, and endosperm. They are typically a good source of B-complex vitamins, Vitamin E, magnesium, iron, and fiber as well as other valuable antioxidants not found in some fruits and vegetables. Most of the antioxidants and vitamins are found in the germ and the bran of the wholegrain.

Whole grains have been shown to reduce the risk of heart disease, primarily by decreasing cholesterol levels, blood pressure and blood coagulation. They have also been shown to reduce the risks of many types of cancers. Additionally, it has been demonstrated that they help regulate blood glucose levels in diabetics. Studies have shown that people who consume more whole grains consistently weigh less than those who consumed less whole grain products.

QUINOA

(Chenopodium quinoa)

General Information - Pronounced "KEEN-wah," this grainlike product is often found in health food stores. The grain, which must be simmered, has a delicious roasted flavor and can be added to vegetable dishes or rice. Quinoa flakes, a hot cereal similar to oatmeal, make a hearty breakfast.

History - A recently rediscovered ancient "grain" native to South America, quinoa was once called "the gold of the Incas," who recognized its value in increasing the stamina of their warriors. Not only is quinoa high in protein, but the protein it supplies is complete protein, meaning that it includes all nine essential amino acids. Not only is quinoa's amino acid profile well balanced, making it a good choice for vegans concerned about adequate protein intake, but quinoa is especially well-endowed with the amino acid lysine, which is essential for tissue growth and repair. In addition to protein, quinoa features a host of other health-building nutrients. Because quinoa is a very good source of manganese as well as a good source of magnesium, iron, copper and phosphorous, this "grain" may be especially valuable for persons with migraine headaches, diabetes and atherosclerosis.

Nutritional Benefits - Quinoa contains more protein than any other grain; an average of 16.2 percent, compared with 7.5 percent for rice, 9.9 percent for millet, and 14 percent for wheat. Some varieties of quinoa are more than 20 percent protein. Additionally, Quinoa's protein is of an unusually high quality. It is a complete protein, with an essential amino acid balance close to the ideal ... similar to milk! Quinoa's protein is high in lysine, methionine and cystine. This makes it an excellent food to combine with, and boost the protein value of other grains (which are low in lysine), or soy (which is low in methionine and cystine). The leaves make a good spinach like vegetable.

BARLEY

(Hordeum vulgare)

General Information - Barley is a multi-use cereal grain with a rich nutty flavor and an appealing chewy consistency. Barley resembles wheat berries, although it is slightly lighter in color. Barley can be found as whole barley, hulled barley, pearled barley and barley flakes. Barley is most commonly used in soups and stews. But when fermented, barley can be used as an ingredient in beer and other alcoholic beverages. Curiously, it had the reputation for being a 'strong' food; it was awarded to the champions at the Eleusian games, and gladiators were called 'hordearii', 'barley men', because that was the chief component of their training diet.

History - Barley originated in Ethiopia and Southeast Asia, where it has been cultivated for more than 10,000 years. Barley was used by ancient civilizations as a food for humans and animals, as well as to make alcoholic beverages; the first known recipe for barley wine dates back to 2800 BC in Babylonia. In addition, since ancient times, barley water has been used for various medicinal purposes. Barley played an important role in ancient Greek culture as a staple bread-making grain as well as an important food for athletes, who attributed much of their strength to their barley-containing training diets. Roman athletes continued this tradition of honoring barley for the strength that it gave them. Gladiators were known as hordearii, which means "eaters of barley." Barley was also honored in ancient China as a symbol of male virility since the heads of barley are heavy and contain numerous seeds.

Since wheat was very expensive and not widely available in the Middle Ages, many Europeans at that time made bread from a combination of barley and rye. In the 16th century, the Spanish introduced barley to South America, while the English and Dutch settlers of the 17th century brought it with them to the United States.

Today, the largest commercial producers of barley are Canada, the United States, the Russian Federation, Germany, France and Spain.

Nutritional Benefits - The propionic acid produced from barley's insoluble fiber may also be partly responsible for the cholesterol-lowering properties of fiber. In addition, barley's dietary fiber is high in beta glucan, which helps to lower cholesterol by binding to bile acids and removing them from the body.

Medical Benefits - Yet another reason to increase your intake of barley is that, in addition to its fiber, barley is also a good source of niacin, a B vitamin that provides numerous protective actions against cardiovascular risk factors. Niacin can help reduce total cholesterol and lipoprotein (a) levels. (Lipoprotein (a) or Lp(a) is a molecule composed of protein and fat that is found in blood plasma and is very similar to LDL cholesterol, but is even more dangerous as it has an additional molecule of adhesive protein called apolioprotein (a), which renders Lp(a) more capable of attaching to blood vessel walls.)

Additional Information - Barley and other whole grains are a rich source of magnesium, a mineral that acts as a co-factor for more than 300 enzymes, including enzymes involved in the body's use of glucose and insulin secretion.

For people worried about colon cancer risk, barley packs a double punch by providing the fiber needed to minimize the amount of time cancer-causing substances spend in contact with colon cells, plus being a very good source of selenium, which has been shown to reduce the risk of colon cancer significantly.

One type of phytonutrient especially abundant in whole grains such as barley are plant lignans, which are converted by friendly flora in our intestines into mammalian lignans, including one called enterolactone that is thought to protect against breast and other hormone-dependent cancers as well as heart disease. In addition to whole grains, nuts, seeds and berries are rich sources of plant lignans, and vegetables, fruits, and beverages such as coffee, tea and wine also contain some. When blood levels of enterolactone were measured in over 800 postmenopausal women in a Danish study published in the Journal of Nutrition, women eating the most whole grains were found to have significantly higher blood levels of this protective lignan. Women who ate more cabbage and leafy vegetables also had higher enterolactone levels. Copper, another trace mineral supplied by barley, may also be helpful in reducing the symptoms of rheumatoid arthritis

Citations

<http://www.whfoods.com/genpage.php?tname=foodspice&dbid=127#healthbenefits>

LINN - HOPS

(Humulus lupulus)

General Information - Hop is a member of the Cannabacea family, traditionally used for relaxation, sedation, and to treat insomnia. A number of methodologically weak human trials have investigated hops in combination with valerian (Valeriana officinalis)for the treatment of sleep disturbances, and several animal studies have examined the sedative properties of hops monotherapy. However, the results of these studies are equivocal, and there is currently insufficient evidence to recommend hops alone or in combination for any medical condition.

History - Hops appear to have been used in the breweries of the Netherlands in the beginning of the fourteenth century. In England they were not used in the composition of beer till nearly two centuries afterwards. The liquor prepared from fermented malt formed the favorite drink of our Saxon and Danish forefathers. The beverage went by the name

of Ale (the word derived from the Scandinavian öl - the Viking's drink) and was brewed either from malt alone, or from a mixture of the latter with Honey and flavored with Heath tops, Ground Ivy, and various other bitter and aromatic herbs, such as Marjoram, Buckbean, Wormwood, Yarrow, Woodsage or Germander and Broom.

Health benefits - Hops contain phytoestrogens that may possess estrogen receptor agonist or antagonist properties, with unclear effects on hormone-sensitive conditions, such as breast, uterine, cervical, or prostate cancer, or endometriosis.

Medical benefits - The bitter principle in the Hop proves one of the most efficacious vegetable bitters obtainable. An infusion of 1/2 oz. Hops to 1 pint of water will be found the proper quantity for ordinary use. It has proved of great service also in heart disease, fits, neuralgia and nervous disorders, besides being a useful tonic in indigestion, jaundice, and stomach and liver affections generally. It gives prompt ease to an irritable bladder, and is said to be an excellent drink in cases of delirium tremens. Sherry in which some Hops have been steeped makes a capital stomachic cordial.

Citations

Grieve, Margaret, .A Modern Herbal, 1931 <http://www.botanical.com/botanical/mgmh/h/hops--32.html>

FLAX SEED

(Linum usitatissimum)

General Information - Flax is truly an amazing grain which is proving itself over and over again as a nutritional wonder-grain. The scientific community is becoming more and more excited as it continues to learn about the healthful and healing effects of flax seed. Almost half the weight of this small, dark brown tear-shaped seed contains oil. But it's not just the oil that's making waves, as flax seed also contains several other remarkable nutritional elements that make it a great ingredient for breads and dishes of all kinds.

History - It was first domesticated in the Fertile Crescent, (Middle East incorporating the Levant, Ancient Mesopotamia, and Ancient Egypt).

Medical Benefits - It may benefit the heart, possess anti-cancer properties and studies performed on mice found reduced growth in specific types of tumors. Initial studies suggest that flaxseed taken in the diet may benefit individuals with certain types of breast and prostate cancers. Flax may also lessen the severity of diabetes by stabilizing blood-sugar levels. There is some support for the use of flax seed as a laxative due to its dietary fiber content though excessive consumption without liquid can result in intestinal blockage.

Nutritional Benefits - Flax seeds contain high levels of lignans and Omega-3 fatty acids.

SORGHUM

(Sorghum bicolor)

History - It originates in Africa, having been cultivated in Egypt in antiquity, and the largest producer of sorghum in the modern era is still Africa, although the crop has spread to southern Asia and the Americas as well. In traditional form, sorghum is a towering plant over six feet tall, although many varieties designed for cultivation are dwarf breeds, specially designed for easy harvest. In Africa, however, traditional tall sorghum is still grown, and the stalks are put to a variety of uses.

Nutritional Benefits - Sorghum is commonly

eaten with the hull, which retains the majority of the nutrients. The plant is very high in fiber and iron, with a fairly high protein level as well. This makes it well suited to its use as a staple starch in much of the developing world. Distantly related to corn, sorghum is gaining wide popularity as a wheat substitute in America.

Medical Claims - Sorghum is a rich source of various phytochemicals including tannins, phenolic acids, anthocyanins, phytosterols and policosanols. These phytochemicals have potential to significantly impact human health. Sorghum fractions possess high antioxidant activity in vitro relative to other cereals or fruits. These fractions may offer similar health benefits commonly associated with fruits. Available epidemiological evidence suggests that sorghum consumption reduces the risk of certain types of cancer in humans compared to other cereals. The high concentration of phytochemicals in sorghum may be partly responsible.

Citations

U.S Grain Council, http://www.grains.org/galleries/defaultfile/Sorghum%20Handbook.pdf

WHEAT

(Triticum spp.)

General Information - All the wheat grown in the world belongs to one of fourteen species, but only half are of any great commercial importance. About 95% of the wheat grown is common. Each species of wheat is subdivided into many varieties with over 30,000 different ones grown throughout the world, giving great variation in shape, size, and color of the ears and the grains themselves. Cakes and pastries are usually made from "soft" wheats, which contain more starch. Pasta is made from hard duram or macaroni wheat (Triticum durum). "Hard" wheats are generally richer in protein than "soft" wheat varieties and make better bread. The variety most often used for bread is *Triticum aestivum*.

History - Prepared by such ancient civilizations as the Babylonians, Hittites and Hebrews, bulghur has been a staple since at least 4,000 BC with some sources suggesting 6,000 BC. Romans, Arabs and Egyptians have recorded its use as early as 1,000 BC. Common in the more easternly Mediterranean regions, it is also has a long history in the Ukarainian and Central Asian cuisines where both bulghur and cracked wheat are used along with kasha, or braised buckwheat groats.

The wild species of wheat has been found in excavations of the upper Tigris-Euphrates basin known as the Fertile Crescent, which is the presumed birthplace of civilization. Wheat vies with barley as the oldest cultivated cereal grain. Einkorn (T. monococcum) is the oldest known cultivated wheat and is now grown mainly in Spain. Hard wheats are thought to have evolved about 8000 BC from the wild species of Triticum, called einkorn (meaning "one seed"), and the related genus Aegilops in South West Asia and the eastern Mediterranean. Wild wheat ears have long spikes, which help the grains hold fast to the earth. They are very brittle and shatter when touched, which is a particularly undesirable feature that was selectively bred out of the wheat developed for commercial use.

Nutritional benefits - Wheat is an excellent sources of fiber, minerals and vitamins. It is an excellent source of Iron, Magnesium, Zinc, and Niacin. It contains protein, B vitamins, minerals and fiber, as well as antioxidants.

LEGUMES

Why Legumes? Peanuts, winged beans, soybeans, and lentils, are collectively known as legumes. These are plants that have pods with tidy rows of seeds inside. Various foods in this category metabolize differently and provide different nutrients. For example, peanuts, which are usually consumed in ways similar to tree nuts are actually in the legume family and grow underground. They contain more fat and fewer carbohydrates than other legumes. Soy beans are unique for their high isoflavone and essential amino content. They are also used to make such a wide variety of foods unlike other beans in this category.

Legumes have many of the nutrients recognized as important in preventing heart disease, cancer, obesity, and other chronic diseases. They are a vegetarian source of protein for the diet. For non vegetarians, they offer an alternative source of protein with less fat and more fiber.

Two of the most critical nutrients for humans are folic acid, essential for normal cell division, immune response and correct development of the fetus in the womb; and thiamine, vitamin B1, essential for metabolizing. Legumes, interestingly, are particularly rich sources of both these fundamentally important elements.

Legumes are typically high in iron and B vitamins, particularly B-6.

PEANUTS

(Arachis hypogaea)

General Information - Contrary to popular belief, peanuts are not true nuts, but are a member of the family of legumes. A peanut start growing as a ground flower but due to its heavy weight, bends towards the ground and eventually burrows underground where the peanut actually matures. They are also known as earthnuts, goobers, goober peas, pindas, jack nuts, pinders, manila nuts and monkey balls. (The last of these is often used to mean the entire pod, not just the seeds).

Origin & History - Peanuts originated in South America and played an important role in the diet of the Aztecs and other Native Indians of South America and Mexico. In the 19th century, peanuts experienced a great gain in popularity in the US thanks to George Washington Carver and a St Louis physician, who still remains unknown today, ground up paste from peanuts and prescribed this high protein, low carbohydrate food to his patients who had poor teeth. His discovery quickly caught on and become a very popular food.

Nutritional benefits - Peanuts pack a serious nutritional punch in a variety of ways. They are a very good source of monounsaturated fats (the good fat), making it a good ally for a healthy heart. They are a good source of vitamin E, niacin, folate, protein and manganese.

Medicinal claims -
Peanuts provide resveratrol, the phenolic antioxidant also found in red grapes and red wine. They rival the antioxidant content of blackberries and strawberries. Resveratrol is a flavonoid which in animal studies has been determined to improve blood flow in the brain by as much as 30%, reducing the risk of stroke.

A number of studies have shown that nutrients found

in peanuts, such as folic acid, phytosterols, phytic acid and resveratrol may have anti-cancer effects.

Research has shown regular consumption of niacin-rich foods like peanuts provides protection against Alzheimer's disease as well as other age related cognitive declines.

A prospective study published in the journal Obesity show people who ate nuts at least twice a week are much less likely to gain weight than those who almost never ate nuts.

SOYBEANS - EDAMAME

(Glycine max)

General Information - The word Edamame means "Beans on Branches," and it grows in clusters on bushy branches. To retain the freshness and its natural flavor, it is parboiled and quick-frozen. In East Asia, the soybean has been used for over two thousand years as a major source of protein. Edamame is consumed as a snack, a vegetable dish, used in soups or processed into sweets. As a snack, the pods are lightly boiled in salted water, and then the seeds are squeezed directly from the pods into the mouth with the fingers.

Origin & History - Edamame is a specialty soybean. Records indicate its use in China more than 2200 years ago. From China, it was introduced into Japan, where it was consumed for centuries before it was documented in the 927 A.D. A seasonal crop, its peak harvest coincided with the full moons of September and October. Originally grown in the berms between rice paddies, edamame is now field-cultivated. David Fairchild, noted horticulturist and plant explorer with the Department of Agriculture, introduced edamame to the U.S. in 1902 after delighting in its flavor and texture while traveling in Japan. He grew it and served it to prominent guests in Washington D.C. Although edamame did not catch on as a snack food as quickly as he had hoped, research has been going on for 75 years, flourishing in the 1930s and 1940s due to a protein shortage. Interest spiked again in the 1970s concurrent with the growing interest in organic agriculture. The focus of the Rodale Research Center was on edamame quality and adaptability, while Cornell University conducted basic agronomic research.

Nutritional benefits - Edamame is a nutritional powerhouse. Like dried soybeans, it is high in phytoestrogens, a natural plant estrogen. A 100 gram serving of the beans only, (not the pods), has 125 hardworking calories packed with 12 grams of protein, 13 grams of carbohydrate, and only 3.5 grams of fat. It is rich in calcium and phosphorus and is a good source of vitamin A.

Medicinal claims - Compared to the traditional soybean, edamame contains a higher level of abscissic acid, a plant hormone that has inhibitory effects. Some of edamame's other characteristics include higher levels of sucrose and protein, all of which result in a tastier, healthier soybean. The green soybeans are also a rich source of vitamins A and B and calcium.

Edamame has health benefits too. McNulty exlained that edamame is a good food for diabetics because it helps to maintain blood sugar levels.

Other edamame health benefits include lower cholesterol levels and decreased risk of heart attacks. Research also suggests that the isoflavones in edamame may reduce or ward off breast cancer in pre-menopausal women.

McNulty was instrumental in the development of this specialty crop's popularity in her area. Along with University of Kentucky Extension educators, McNulty secured one of Southern Region Sustainable Agriculture Research and Education's first sustainable community innovation grants. According to a USDA article, the funds from this grant were applied to promoting edamame as a profitable crop with great health potential.

The already-identified health benefits of soy (low-fat, high-protein, low-cholesterol) accelerated the University of Kentucky's effort to promote the nutritional benefits of edamame to heart patients and healthcare workers.

Citations

Mullett, Marissa, "Edamame's Popularity is Growing", <http://ourohio.org/index.php?page=edamame-s-popularity-is-growing>

LENTILS

(Lens ensculenta)

General Information - Lentils are legumes. They grow in pods that contain either one or two lentil seeds. They are classified according to whether they are large or small in size with dozens of varieties of each being cultivated. While the most common types in the United States are either green or brown, lentils are also available in black, yellow, red and orange colors. These round, oval or heart-shaped disks are small in size, oftentimes smaller than the tip of a pencil eraser.

Lentils are a very popular legume used throughout much of the world. Brown lentils don't hold their shape well after being cooked, however green lentils do. Lentils have a high nutritional value second only to soy beans in protein content. They make a great soup all by themselves and can also be ground and made into meatless patties. Lentils sprout in two days, being crisp and sweet, they are a great addition to salads. Lentils have been a popular food in the Middle East for thousands of years. Lentils are mentioned 4 times in the bible, the first time being in that bowl of pottage Jacob gave Esau as he forsook his birthright about 4,160 years ago.

Origin & History - Lentils are believed to have originated in central Asia, having been consumed since prehistoric times. They are one of the first foods to have ever been cultivated. Lentil seeds dating back 8000 years have been found at archeological sites in the Middle East. For millennia, lentils have been traditionally been eaten with barley and wheat, three foodstuffs that originated in the same regions and spread throughout Africa and Europe during similar migrations and explorations of cultural tribes. Before the 1st century AD, they were introduced into India, a country whose traditional cuisine still bestows high regard for the spiced lentil dish known as dal.

Nutritional benefits - Lentils have a high nutritional value second only to soy beans in protein content. They are an excellent source of molybdenum and folate. They are a very good source of dietary fiber and manganese and a good source of iron, protein, phosphorous, copper, thiamin and potassium. Not only do lentils help lower cholesterol, they are of special benefit in managing blood-sugar disorders since their high fiber content prevents blood sugar levels from rising rapidly after a meal. But this is far from all lentils have to offer. Lentils also provide good to excellent amounts of six important minerals, two B-vitamins, and protein—all with virtually no fat.

Medicinal claims - A study published in the Archives of Internal Medicine confirms that eating high fiber foods, such as lentils, helps prevent heart disease. Lentils' magnesium puts yet another plus in the column of its beneficial cardiovascular effects. Magnesium is Nature's own calcium channel blocker. When enough magnesium is around, veins and arteries breathe a sigh of relief and relax which lessens resistance and improves the flow of blood, oxygen and nutrients throughout the body. Studies show that a deficiency of magnesium is not only associated with heart attack but that immediately following a heart attack, lack of sufficient magnesium promotes free radical injury to the heart. Check a chart of the fiber content in foods; you'll see legumes leading the pack. Lentils, like other beans, are rich in dietary fiber, both the soluble and insoluble type. Soluble fiber forms a gel-like substance in the digestive tract that snares bile (which contains cholesterol) and ferries it out of the body. Research studies have shown that insoluble

fiber not only helps to increase stool bulk and prevent constipation, but also helps prevent digestive disorders like irritable bowel syndrome and diverticulosis.

Citations

The George Mateljan Foundation for The World's Healthiest Foods, "Lentils", <http://www.whfoods.com/genpage.php?tname=foodspice&dbid=52#he

HUNAN WINGED BEAN

(Psophocarpus tetragonolobus)

General Information - The winged bean is one of the newest Asian vegetables coming to market these days. Known for centuries in tropical Asia, this attractive climbing perennial is more or less your total meal: all parts of the plant are edible — the pods, the beans inside, the shoots, the flowers and even the tuber.

Origin & History - Winged beans are said to have originated in Mauritius or Madagascar. They are thought to have been disseminated by Arabs because some of the names used for the beans in places such as Malaysia (where the beans are called "kacang botol") are derived from Arabic. This is one of the most important vegetables in south Indian and Thai cooking because the plants are perennial in the tropics and they supply a steady source of food year-round. Their nitrogen-fixing ability helped secure their role as a cover crop on banana plantations, both to enrich the soil and to provide an alternative source of income when bananas are not producing. They are adaptable to a wide variety of conditions, which caused them to spread quickly. Today there are hundreds of varieties, many of which were developed in China. Today the beans are sold as four-angled beans, Goa beans, princess beans, winged peas and winged beans.

Nutritional benefits - This bean has been called the "one species supermarket" because practically all of the plant is edible. The beans are used as a vegetable, but the other parts (leaves, flowers, and tuberous roots) are also edible. The tender pods, which are the most widely eaten part of the plant, can be harvested within two to three months of planting. The flowers are often used to color rice and pastries. The young leaves can be picked and prepared as a leaf vegetable, similar to spinach. The roots can be used as a root vegetable, similar to the potato. They are also much richer in protein than potatoes. The dried seeds can be useful as flour. Each of these parts of the winged bean provides a source of vitamin A and other vitamins.

Medicinal claims - Winged beans have the richest source of betulinic acid, which is one of the most promising phytochemicals for melanoma. Additionally, phytoestrogens daidzein and genistein content are being analyzed as these also show anticancer activities that could also be helpful in melanoma.The stems and young shoots, also reportedly edible, are much better sources of the antimelanomic compound than the seeds.

Citations

Duke, James A. Ph.D. "Winged Bean Fights Cancer" June/July 2007

<http://www.motherearthnews.com/Winged-Bean-Fights-Cancer.aspx,>.