

# **THE PEANUT VISION**

Sustainable, Nutritious, Global Food Source

[PEANUTVISION.ORG](http://PEANUTVISION.ORG)



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IN 2017

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Peanuts are one of the most sustainable, nutritious food sources available.

**Peanuts are positioned to meet the challenges of a growing world.**

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A close-up photograph of two hands cupped together, with water dripping from the fingers. The image is dark and moody, with a blue tint.

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**ENVIRONMENT**

The naturally sustainable food source

A close-up photograph of two hands holding several peanuts. The image is dark and moody, with a blue tint.

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**WELLNESS**

Better living through peanuts

A photograph of peanut plants with green leaves and small, round, brown peanuts hanging from the stems. The image is dark and moody, with a blue tint.

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**INNOVATION**

The future of peanuts

A close-up photograph of two hands holding a single peanut. The image is dark and moody, with a blue tint.

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**FOOD SAFETY**

Every peanut is inspected

A photograph of a person's hands holding a woven basket filled with peanuts. The image is dark and moody, with a blue tint.

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A close-up photograph of two hands holding a single peanut. The image is dark and moody, with a blue tint.

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Sources and further reading



**7,000**

American peanut-farming families strong



**33**

percent decrease in water irrigation from 1996 to 2013



**25,300,000**

contributed to food allergy research, education and outreach

A close-up photograph of a hand holding a stream of water, with a blue tint overlaying the entire image. The hand is positioned palm-up, and a thin, vertical stream of water is falling from the fingers. The background is dark and out of focus.

# **ENVIRONMENT**

Peanut farmers are making continuous improvements in water conservation, chemical reduction and farmland development.





#### Water Use

Peanuts use less water than comparable sources of nutrition.



#### Chemical Use

Peanuts are hardy, nitrogen-fixing plants, meaning they need less fertilizer and pesticides.



#### Resource Use

Less water, fertilizers and pesticides mean that peanut production has a reduced carbon footprint.

**As a nitrogen-fixing plant, peanuts are naturally sustainable rotation crops.**

Peanut roots replenish the essential nitrogen in soil that's depleted by other crops.

This means farmers need less fertilizer to grow peanuts and the next season's crop, like cotton.

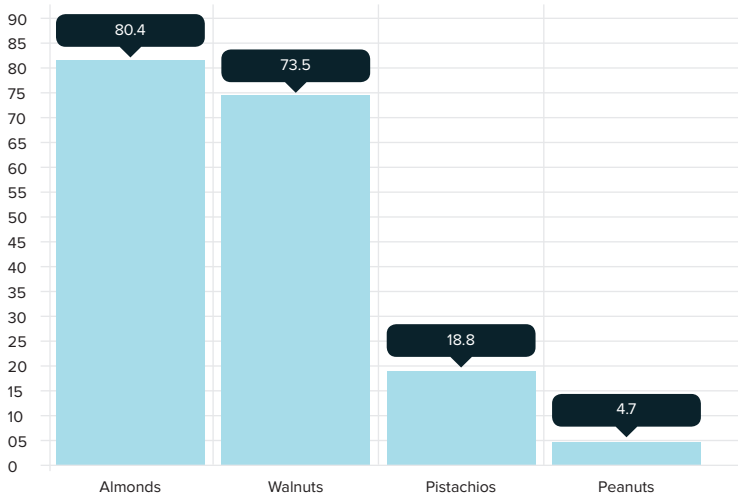




# 85 percent of the world's supply of fresh water goes to agriculture.

(Source: Unesco)

## WATER USAGE AMONG POPULAR NUT VARIETIES (GALLONS PER OUNCE)



Peanuts are far more water efficient than other nuts.

The minority of U.S.-grown peanuts are irrigated (35-40 percent).

Peanuts have a small water footprint because of their specific growing regions, compact plant structure and underground fruiting.

MEKONNEN, M. & HOESTRA, A. (2010). *THE GREEN, BLUE AND GREY WATER FOOTPRINT OF CROPS AND DERIVED CROP PRODUCTS*.

Since its inception, The National Peanut Board has invested more than \$2,600,000 to improve peanut crops' water efficiency



## American peanut farmers have always been good stewards of the land



## Improvements in Sustainability

USDA DATA 1999-2013



Increased

TECHNOLOGY ADOPTION

50%



Decreased

FERTILIZER USE

42.5%

WATER USE

33%

PESTICIDE USE

25%

Peanut farmers focus on growing the best crop, with the fewest added fertilizers and chemicals, because doing so makes both economic and environmental sense. The proof of this practice has been handed down with the land — most peanut farms in rural America are multigenerational, with families living and working the fields over generations and decades. Peanut farmers care for the land of their grandparents so they can hand it down to their grandchildren.

A close-up photograph of a hand holding several peanuts. The image is heavily tinted with a dark blue color, creating a moody and artistic effect. The peanuts are light-colored, contrasting with the dark background. The hand is positioned with the palm facing up, and the peanuts are clustered in the center. The lighting is soft, highlighting the texture of the skin and the smooth surface of the peanuts.

# **WELLNESS**

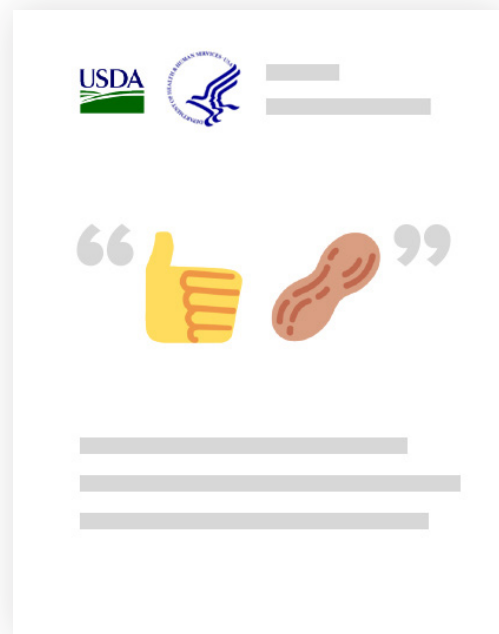
Peanuts are a protein-packed, nutritious, plant-based food with a positive impact on health.



## Peanuts are an affordable, plant-based protein.

Plant-based diets promote better health and cause less environmental impact than diets rich in animal-based foods.

See: [Scientific Report of the 2015 Dietary Guidelines Committee](#)



\$0.15

1 SERVING  
= 1 OUNCE  
= 2 TABLESPOONS  
= 32 GRAMS

8g

OF PROTEIN



\$0.21

1/3 SERVING  
= 1 OUNCE  
= 28 GRAMS

8g

OF PROTEIN

Source: Bureau of Labor and Statistics for Oct. 2016 price

## Research studies from Harvard and The American Journal of Clinical Nutrition confirm that peanuts have a positive impact on disease prevention and health maintenance.

### OVERALL:

Eating peanuts has been associated with reduced risk of several chronic diseases in multiple research studies.

### HEART DISEASE:

Frequent peanut consumption could reduce the risk of death from heart disease by 29 percent. Scientific evidence suggests, but does not prove that eating 1.5 ounces per day of most nuts, including peanuts, as part of a diet low in saturated fat and cholesterol may reduce the risk of heart disease.

*A recent analysis of 76,000 women and 42,000 men, all who were U.S. health professionals, found those who reported eating peanuts and other nuts at least five times per week were 29 percent less likely to die of heart disease, compared to those who avoided nuts and peanuts over a 30-year time period. The study was conducted by researchers at Brigham and Women's Hospital and Harvard T.H. Chan School of Public Health. Limitations include the use of food frequency questionnaires that are subject to human error, the narrow study population of health professionals, and the fact that it was not a randomized controlled trial.*

### DIABETES:

The more frequently peanuts and peanut butter are consumed, the more the risk of type 2 diabetes may decrease.

*Consumption of peanut butter and nuts, including peanuts, have been associated with decreased risk of type 2 diabetes. Harvard researchers conducted a study of over 83,000 women (ages 34 to 59) from 11 states who were followed for 16 years, during which they recorded their dietary intake five times throughout the period. Results showed peanut butter and nut (including peanuts) consumption (5 servings of peanut butter or 5 ounces of peanuts per week) was inversely associated with development of type 2 diabetes. Limitation include data on women only, who were also nurses, and the use of food-frequency questionnaires, which are subject to human error.*

### LONGEVITY:

People who eat peanuts five or more times per week may decrease their risk of death from all causes by 20 percent.

*Eating peanuts five or more times per week has been associated with decreased risk of death from all causes by 20 percent. A recent study of 76,000 women and 42,000 men, who were all health professionals, showed an inverse association between peanut and nut consumption and all-cause mortality. After 30 years of follow-up, about 16,000 deaths of women were reported; after 24 years of follow-up, about 11,000 deaths of men were reported. As compared with participants who did not eat nuts, those who consumed nuts seven or more times per week had a 20-percent lower death rate. The study was conducted by researchers at Brigham and Women's Hospital and Harvard T.H. Chan School of Public Health. Limitations include the use of food-frequency questionnaires, which are subject to human error, the narrow study population of health professionals and the fact that it was not a randomized controlled trial.*

### OBESITY:

Frequent peanut and peanut butter consumers have lower BMIs and body weight even if they consume more calories.

*Peanut and peanut butter consumption has been linked to improved weight maintenance and loss. Peanuts have fat, protein and fiber, which all help people feel full longer. A Harvard-supervised study found that participants (101 overweight men and women) on a calorie-controlled, moderate-fat diet had greater and more sustained weight loss than people on a calorie-controlled, low-fat diet. Participants in the moderate-fat diet were also more likely to remain compliant at 18 months. The results suggested that a moderate-fat diet, which included peanuts and peanut butter, resulted in weight loss without the participants reporting feelings of hunger. Limitations included its relatively small sample size and the lack of success in obtaining follow-up measurements of all dropouts.*





**Peanuts are a good source of fiber, good fats and contain more than 30 essential vitamins and minerals.**

One serving of peanuts is a good source of...

Folate	41.1 mcg – (10% Daily value)	Helps produce red blood cells and is essential during pregnancy.
Vitamin E	30 IU – (16% Daily value)	An antioxidant that helps support the immune system.
Magnesium	50 mg – (13% Daily value)	Important for heartbeat regularity, as well as healthy muscles and nerves.
Copper	0.2 mg – (9% Daily value)	Essential for red blood cell formation, nerves, immune system and bones.
Phosphorus	101 mg – (10% Daily value)	Important for bone health, hormones and energy production.
Niacin	3.8 mg – (20% Daily value)	Helps convert food to energy and supports digestive, nervous system and skin health.



Project Peanut Butter was founded by Mark Manary, M.D., a pediatrician and specialist in fighting malnutrition.

In 1985, Dr. Manary and his wife, Mardi Manary, moved to Africa to work in a rural hospital in Tanzania. Dr. Manary realized that the available emergency foods were insufficient for countering the extent of malnutrition he encountered. He and colleague Dr. André Briend developed a new peanut-based ready-to-use therapeutic food (RUTF), which is shelf-stable and more easily distributed than previous RUTF formulations.

Recovery rates with the new peanut-based RUTF are dramatically higher than the older liquid formula, rising from 25–50 percent to 75–95 percent. Learn more about Project Peanut Butter at [projectpeanutbutter.org](http://projectpeanutbutter.org).





A close-up photograph of a hand holding a peanut plant. The plant's roots are visible, and several peanut pods are attached to the stems. The image is overlaid with a dark blue filter. The word "INNOVATION" is written in large, white, bold, sans-serif capital letters across the middle of the image.

# INNOVATION

The peanuts of tomorrow are more popular, hardier, more drought-resistant and useful in unexpected ways.



## A recent study from Deloitte shows that consumers are becoming more eco-conscious, globally minded and sustainability-focused.

Peanuts present an all-in-one solution for these increasingly important market demands.

Peanuts are a key ingredient in world cuisines, a health-conscious alternative to decadent dessert products and essential to the growing consumer movement to help the planet by eating less meat and more plants.



**CHOCOLATE & PEANUT BUTTER TART**



**UDON NOODLES, BRAISED PORK,  
PEANUT SAUCE**



**AFRICAN-SPICE PEANUT STEW**

See more recipes on [NationalPeanutBoard.org](https://NationalPeanutBoard.org)



Peanuts are already a global favorite and a central ingredient in many world cuisines.

Peanuts were domesticated from wild South American varieties in the Andes thousands of years ago. European explorers took them back to Spain, and then on to Asia and Africa. Africans first introduced peanuts to North America in the 1700s.

Today, peanuts are known as core ingredients in Mexican molés, African stews, Asian sauces and many other meals people enjoy and count on every day.



Pelletized peanuts made from the peanut hulls are used for animal feed and fuel.



Peanut “hay” made from the vines is used as ground cover or put back in the land to enrich the soil.



Scientists are researching peanut skins, which contain high levels of antioxidants and polyphenols, for emergent uses.

# We have the technology to create many useful substances out of peanut oil.

In the future, there may be a market demand for petroleum substitutes and products like:



Biodiesel



Plant-Based Plastics



Lubricants



A person's hands are shown holding a sandwich filled with peanut butter and jelly. The sandwich is cut in half, and the filling is visible. The person's fingers are visible, and they are holding the sandwich from both sides. Below the sandwich being held, another sandwich is visible, also cut in half and showing the same filling. The background is dark and out of focus.

# **FOOD SAFETY**

The peanut industry invests in research to eliminate food allergies and follows regulations that prevent toxins from entering the food supply.

# U.S. peanut producers follow some of the most stringent food safety standards in the industry.

Peanuts are inspected for a variety of things



Peanut crops are always inspected to ensure they meet USDA standards for

**mold**



Peanuts are inspected for

**damage**



Peanuts are inspected for proper  
**moisture content**



Peanuts are inspected to screen out  
**foreign materials**



See: [The USDA's Peanut Standards Board 2002 Farm Bill](#)

A warm-toned photograph of a baby sitting at a table, being fed with a spoon. The baby is looking towards the camera. The background is softly blurred.

The groundbreaking LEAP Study discovered that

**introducing peanut products to infants early can reduce the risk of developing a peanut allergy by up to 86 percent**

**1%**

the true percentage of Americans with a peanut allergy

PREVALENCE OF PEANUT AND TREE NUT ALLERGY IN THE US DETERMINED BY A RANDOM DIGIT-DIAL TELEPHONE SURVEY. (J ALLERGY CLIN IMMUNOL. 1999 APR;103(4):559-62.)

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**24%**

the percentage of Americans that people *incorrectly* believe have a peanut allergy

THE BANTAM GROUP. ALLERGY AND SCHOOL BANS/RESTRICTIONS, 2013 CONSUMER STUDY

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Over the past 16 years, The National Peanut Board has led the fight to solve food allergies like no other commodity board. Through its efforts, America's Peanut Farmers have earmarked more than

**\$25 million to food allergy research, education and outreach.**





THROUGH THE UNIVERSITY OF GEORGIA'S *FEED THE FUTURE* PROGRAM:

## Farmers in Ghana are testing new post-harvest methods to prevent aflatoxin development in peanuts.

Aflatoxin is a naturally occurring fungal toxin found in everyday environments. Aflatoxins can occur in crops and food products like corn, peanuts, cottonseed, tree nuts and many more. For peanuts to be certified as meeting edible quality grade standards, their aflatoxin content must be 15 parts per billion (ppb) or less.

Thanks to programs like this, researchers are learning how to deal with crop stressors and are boosting domestic production research with new data. To date, there has never been an outbreak of human illness from aflatoxins in the U.S.

See: [NATIONAL CANCER INSTITUTE](#)

See: [BAD BUG BOOK](#)

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### THE FUTURE OF FOOD

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“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

GOLD STANDARD DEFINITION OF SUSTAINABLE DEVELOPMENT, SET BY THE U.N. BRUNDTLAND COMMISSION



By 2050, the world population will be 9 billion



Currently, 795 million people don't have enough food



Hunger kills more people than AIDS, malaria and tuberculosis combined



Malnutrition kills 5.9 million young children each year

Water-efficient, nutrient- and energy-dense crops like peanuts are the key to saving lives now and meeting the food supply and nutrition demands of the future.

Read more about what peanuts are doing for the hungry at [PB4h.org](http://PB4h.org)

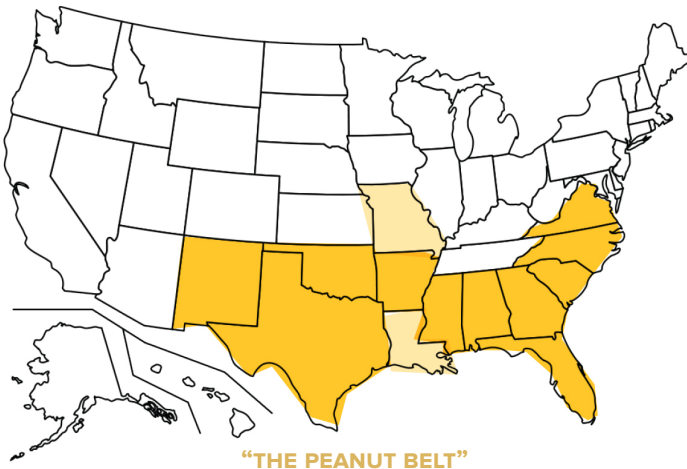


A close-up photograph of a person's hand sorting through a large quantity of peanuts in a woven basket. The basket is filled with peanuts, and the hand is reaching in to pick up or move them. The background shows a patterned fabric, possibly a skirt or shirt. The overall image has a dark, teal-colored overlay.

# COMMUNITY

Peanuts are the cornerstone crop of multigenerational farmers in the rural south, supporting land stewardship and the economy.



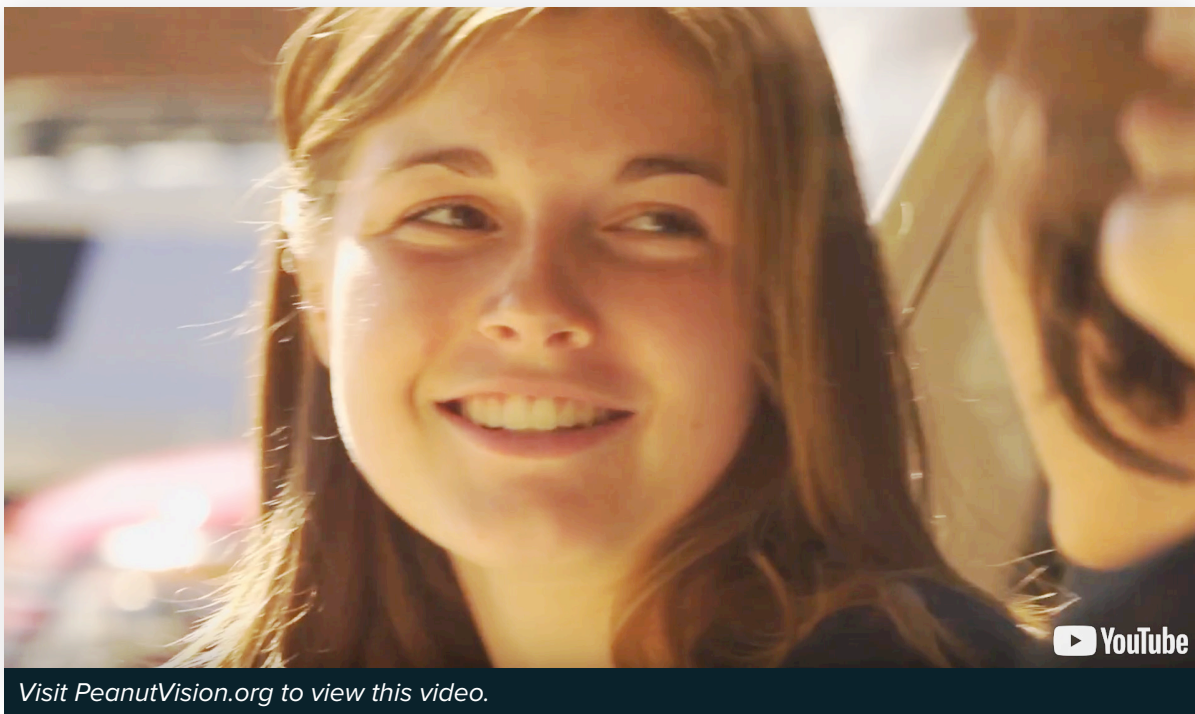


**In the rural American South — the Peanut Belt — peanuts are more than just a crop the farmers grow.**

They're an economic and social keystone.

Most peanuts are planted and harvested by peanut-farming families on small, multigenerational farms. Farmers work with their local agriculture businesses to sell and distribute their harvests, maintain their implements and invest in their land. The family farmers can also handle all the planting and harvesting without seasonal labor, which keeps the economic benefits close to home.

## A History Rooted in Family



**The U.S. peanut crop has an annual value of more than \$1 billion**

Source:  
United States Department of Agriculture





## Peanuts: A Proven Solution

After studying the infertile farmland plaguing the American South around the turn of the last century, George Washington Carver realized that the soil was completely depleted of valuable minerals from the unbroken annual cotton crops. He surmised that crop rotation with a nitrogen fixing crop could restore the land. Peanuts, as a legume, were both easy to grow and naturally replenished the soil's nitrogen levels, which had been drained by cotton plants.

Dr. Carver later discovered more than 300 uses for peanuts. The agricultural and economic benefits of peanuts gave the South a much-needed boost. Some historians even credit Dr. Carver with saving the South.

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EFFORTS WORLDWIDE

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## Laying Community Cornerstones Overseas



The National Peanut Board partners with many organizations to fund overseas research and philanthropic efforts.

Currently, leaders in the peanut industry are involved in projects with local farmers in many countries, including Haiti and Ghana, to help advance their planting and harvesting techniques, increase crop yields and decrease spoilage and contamination. The increased productivity provides peanuts for both famine relief and the local markets, strengthening the health and economies of local communities.

Peanuts also directly support women's empowerment overseas. For example, more than 40 percent of the agricultural labor force in Ghana is female. The increases in peanut yields allow them to earn more income and provide more food for their communities.

See: [Gender and Land Rights Database – Ghana](#)



A close-up photograph of a person's hands, likely of African descent, holding and shelling peanuts. The hands are cupped together, with one hand holding several peanuts and the other hand shelling them. The background is a soft, out-of-focus light blue. The entire image is covered with a semi-transparent dark blue overlay, which makes the white text stand out.

# LEARN

Read more about the peanut nutrition, advances and industry resources used to compile the report.



**Mekonnen, M. & Hoestra, A. (2010).** The green, blue and grey water footprint of crops and derived crop products. University of Twente, Enschede, The Netherlands, Twente Water Centre. Deltf: UNESCO – IHE Institute for Water Education

## WELLNESS

**Heart Disease and Longevity – Bao Y, Han J, Hu F, et. al.** Association of Nut Consumption with Total and Cause-Specific Mortality. *N Engl J Med.* 2013;369:2001-11. DOI:10.1056/NEJMoa1307352.

**Diabetes – Rui Jiang, MD; JoAnn E. Manson, MD; Meir J. Stampfer, MD; et al.** Nut and Peanut Butter Consumption and Risk of Type 2 Diabetes in Women. *JAMA.* 2002;288(20):2554-2560. doi:10.1001/jama.288.20.2554.

**Obesity – Freisling H, Hwayoung N, Slimani N, et al.** Nut intake and 5-year changes in body weight and obesity risk in adults: results from the EPIC-PANACEA study. *Eur J Nutr.* 2017. DOI: 10.1007/s00394-017-1513-0).

**Folate-deficiency anemia – MedlinePlus.** <https://medlineplus.gov/ency/article/000551.htm>. Updated November 6, 2017. Accessed November 17, 2017.

**Magnesium.** National Institutes of Health: Office of Dietary Supplements. <https://ods.od.nih.gov/factsheets/Magnesium-HealthProfessional/>. Updated February 11, 2016. Accessed November 30, 2017.

**Copper in diet.** MedlinePlus. <https://medlineplus.gov/ency/article/002419.htm>. Updated November 6, 2017. Accessed November 30, 2017.

**Phosphorus in diet.** MedlinePlus. <https://medlineplus.gov/ency/article/002424.htm>. Updated November 6, 2017. Accessed November 30, 2017.

**Niacin.** MedlinePlus. <https://medlineplus.gov/ency/article/002409.htm>. Updated November 6, 2017. Accessed November 30, 2017.

**Vitamin E.** National Institutes of Health: Office of Dietary Supplements. <https://ods.od.nih.gov/factsheets/VitaminE-HealthProfessional/#h3>. Updated November 3, 2016. Accessed November 17, 2017.

## ENVIRONMENT

**Mekonnen, M. & Hoestra, A. (2010).** The green, blue and grey water footprint of crops and derived crop products. University of Twente, Enschede, The Netherlands, Twente Water Centre. Deltf: UNESCO – IHE Institute for Water Education

## INNOVATION

**Deloitte – Capitalizing on the shifting consumer food value equation (PDF)**

**National Peanut Board – History of Peanuts and Peanut Butter**

**USDA Agricultural Research Service – Peanut Biodiesel**

**U.S. National Library of Medicine National Institutes of Health – Application of proanthocyanidins from peanut skins as a natural yeast inhibitory agent**

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## FOOD SAFETY

**USDA** – [Peanut Standards Board – 2002 Farm Bill Provisions \(PDF\)](#)

**World Food Programme** – [WFP says hunger kills more than AIDS, malaria, tuberculosis combined](#)

**United Nations Department of Economic and Social Affairs** –  
[World population projected to reach 9.7 billion by 2050](#)

**Food and Agriculture Organization of the United States** –  
[The State of Food Insecurity in the World 2015 \(PDF\)](#)

**U.S. Government Publishing Office** – [Farm Security and Rural Investment Act of 2002 \(PDF\)](#)

**Project Peanut Butter** – [Ghana](#)

**DuToit G, Roberts G, Sayre PH, Bahnson HT, Radulovic S, Santos AF, et al.** Randomized trial of peanut consumption in infants at risk for peanut allergy. *N Engl J Med.* 2015;372:803-13.

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## COMMUNITY

**National Peanut Board** – [Peanut Country, U.S.A.](#)

**Ghana Statistical Service** – [Ghana Living Standards Survey Round 6 Labour Force Report \(PDF\)](#)

**Food and Agriculture Organization of the United States** – [The role of women in agriculture \(PDF\)](#)





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