

OPINION

Types, Composition, Importance And Beneficial Uses Of Soybean



Amina Waris

Soybean is a self-pollinated crop. The color of self-pollinating flowers are white and shades of purple. Seeds color change. It can be green, yellow, brown, or black.

The botanical name of soybean is Glycine max. Soybean belongs to the Legume family (Fabaceae). Its chromosome number is $2n=2x=40$. Soybean is also known as soja bean.

Soybean is a self-pollinated crop. The color of self-pollinating flowers are white and shades of purple. Seeds color change. It can be green, yellow, brown, or black.

Though commercial varieties have brown ten seeds, four seeds are present per pod. The soybean is the most important bean in the world, providing vegetable oil for millions of people and hundreds of chemical products.

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Role Of Soybeans In Global Food Security



Ayesha

Soybeans are an important source of food & feed, with most of the crops used for animal feed. This is due to their high protein content, which makes them an ideal livestock food source.

Soybeans are a versatile crop that has been gaining increasing attention in recent years for their important role in global food security. As one of the most widely produced and consumed crops worldwide, soybeans are an essential source of protein, fiber, and healthy fats for millions.

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The Health Benefits Of Soybeans



Akasha Shahbaz

One of the most well-known health benefits of soybeans is their high protein content. Soybeans are a complete protein source. Soybeans have been consumed for centuries in many parts of the world, particularly in Asia, where they are a staple food. In recent years, there has been growing interest in the health benefits of soybeans, which are packed with nutrients and bioactive compounds that can promote health and prevent disease.

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PCRWR Organises Workshop On Identification Of Potential Sites For MAR

Dr. Muhammad Ashraf, Chairman, PCRWR, emphasised the significance of preserving a balance between groundwater abstraction and recharge during his opening remarks.

In the Peshawar Valley KP, the Pakistan Council of Research in Water Resources (PCRWR) and the Asian Development Bank (ADB) have organised a training workshop on the topic of identifying potential sites for managed aquifer recharge (MAR).

According to a statement released here on Wednesday, the workshop was a component of support for the creation of climate-resilient solutions

for Pakistan's agricultural and natural resources (ANR) sector in the provinces of Punjab and Khyber Pakhtunkhwa.

The main goal of workshop identifying potential sites for MAR is to unite the participants and increase their capacity for effective groundwater resource management in Khyber Pakhtunkhwa.

Dr. Muhammad Ashraf, Chairman, PCRWR, emphasised the significance of preserving a balance between groundwater abstraction and recharge during his opening remarks.

He also mentioned that groundwater is a valuable hidden resource that must be

utilised effectively. Since the groundwater resource is severely threatened by the rapid urbanisation and population growth.

Furthermore, excessive exploitation is contributing to the decline in groundwater quality. For the sustainability of the industry, he said, it is urgent to concentrate on rainwater harvesting and groundwater recharge. He also outlined various PCRWR initiatives for managing the nation's groundwater resources. Dr. Naveed Iqbal, Director (Hydrology), PCRWR, gave a thorough presentation on the methodology created by PCRWR for establishing groundwater recharge sites in

Islamabad with the aid of CDA following the opening remarks.

A detailed presentation on the data requirements for MAR was given by Dr. S.A. Parthapar, Consultant, Asian Development Bank (ADB). He also talked about various GIS-based data collection tools for MAR.

Twelve professionals from various departments in Khyber Pakhtunkhwa, including agriculture, irrigation, and public health engineering, took part in the workshop to build their skills. Additionally, they provided updates on the data accessibility for their departments' efforts to identify Peshawar Valley groundwater recharge sites...[Read More](#)

Shooter Game Explottens Soon To Launch On Google Play, App Store



Playdev is starting pre-registration campaign for game to commemorate this announcement, where players can sign up and receive a unique gift in appreciation for their support.

Explottens' creators, Playdev, are thrilled to announce that the game will be made available on Google Play and the App Store in the summer of 2023. A larger audience will

be able to play the previously Apple Arcade-only game, giving more players the chance to take part in Explottens' fast-paced action and excitement.

The Playdev is starting a pre-registration campaign for the game to commemorate this announcement, where players can sign up and receive a unique gift in appreciation for their support. Keep an eye out for more details, as the pre-registration will begin on March 20.

The quick-witted and action-packed arcade game Explottens will put players' reflexes to the test. Players take control of Captain KIT, a hero tasked with defending their homeland against the evil Klaw organization. Explottens provides a distinctive and thrilling gaming experience with its competitive and difficult gameplay, epic bosses to face off against, and entertaining plot.

The lead developer, Bilal Mirza, said,

"We're thrilled to bring Explottens to a wider audience. "Players on the Apple Arcade have given the game very positive feedback, and we can't wait for even more players to enjoy Explottens' fun and excitement." A video game subscription service called Apple Arcade is provided by Apple Inc.

Although the pre-registration has just gone live, the official release date for the Explottens on Google Play and the App Store has not yet been determined. By following the game's official social media channels, players can stay up to date on all the most recent news and information.

Indie game developer the Playdev is based in Pakistan and aims to create games that will entertain, challenge, and inspire players. It aims to inspire the following generation of the Pakistani game developers and designers by demonstrating that great studios can exist anywhere in the world.

CN-PAK To Jointly Promote Bilateral Agricultural Technology Cooperation

Dr. Hussain Ahmad Janjua said that One crucial area for both nations to address food security is food processing and preservation.

A Document of Understanding (DoU) was signed in Weifang, China, by the National University of Sciences and Technology, Pakistan (NUST), the Weifang Engineering Vocational College, the Qingzhou Municipal Government, and the Weifang National Comprehensive Pilot Agriculture Zone in an effort to advance industry-university-research strategic cooperation between China and Pakistan on modern agriculture.

The construction of the entire agricultural industry chain system, deep processing of agricultural products, and related industrialization development were the three main areas of focus for the four parties as they agreed to work together to promote bilateral agricultural technology cooperation within the CPEC framework.

"Agriculture in the South Asian Region is struggling with low productivity, supply shortages, low returns to farmers, a lack of advanced technology, and a lack of trained professionals, threatening our food security," Pro Rector Academics of NUST Dr. Osman Hassan noted in his speech.

Since Pakistan is an agro-economic nation with enormous potential for crop production and agricultural science research, he said that these issues are closely related to people's livelihoods and well-being.

According to Dr. Osman Hassan, the NUST is currently engaged in research pertaining to precision agriculture, multi-spectral crop field sensing, agricultural 3D printing and scanning applications, early pathogen detection, and plant



disease management.

"However, research on sustainable agricultural resource management systems continues to be a significant challenge for us, and I sincerely believe that today's agreements will undoubtedly play an indispensable role in filling these gaps."

Dr. Hussain Ahmad Janjua, Principal, Atta-ur-Rahman School of Applied Biosciences (ASAB), NUST, was another conferee who supported his arguments with concrete examples "One crucial area for both nations to address food security is food processing and preservation. Modern food storage techniques and infrastructure must be introduced in Pakistan to extend the shelf life of perishables like fruits and vegetables. Chinese modern technology's contribution in this area would support research and development in this important field..."[Read More](#)

NCE Organises Conference On Renewable Energy And Advanced Materials

In order to address severe energy crises facing the nation, event offered forum for scientists, experts, engineers, industrial partners, & students to share their knowledge & expertise.

The National Centre of Excellence (NCE) in Physical Chemistry, University of Peshawar, in association with the Directorate of Quality Enhancement, University of Peshawar, hosted the three-day International Conference on "Renewable Energy and Advanced Materials (ICREAM-2023)" from March 6-8, 2023, at the Sir Sahibzada Abdul Qayyum (SSAQ) Museum Conference Hall, University of Peshawar.

This three-day symposium brought together researchers

and graduate students to discuss the most recent findings in the fields of advanced materials and renewable energy. In order to address the severe energy crises facing the nation, the event offered a forum for scientists, experts, engineers, industrial partners, and students to share their knowledge and expertise.

In addition to Prof. Dr. Jehan Bakht, Vice Chancellor of the Agriculture University of Peshawar, Prof. Dr. Muhammad Idrees, Vice Chancellor of the University of Peshawar, attended the inaugural ceremony as a Guest of Honor. The conference's chief guest, Prof. Dr. Muhammad Idrees, emphasised the need for discussions on utilising scientific research, innova-

tion, and technology.

He commended the work of Mr. Zahoor Ahmad, Director, Directorate of Quality

Enhancement, University of Peshawar, and his team as organisers for the promotion of science and technology. Mr. Zahoor

Ahmad is the Director of the NCE in Physical Chemistry.

On the first day of the conference, Dr. Zahid Ali Ghazi discussed the significance and goals of the event while Prof. Dr. Abdul Naeem, Director, NCEPC, University of Peshawar, welcomed the attendees and highlighted accomplishments of the NCE in Physical Center. Australia, the United States of America, China, Poland, Malaysia, and Pakistan were represented among the keynote speakers. Prof. Dr. Zahid Anwar, pro-vice chancellor at the University of Peshawar, attended the conference's closing ceremony as chief guest on the third day. He praised the fact that science unites people...[Read More](#)





Pakistani Women Recognised In Fields Of Climate Change, Gender Equality



Along with the first, second, and third place winners of the award, cash prizes worth €3,500 (Dh13,543), €2,500 (Dh9,673), and €2,000 (Dh7,739) were also given.

An award ceremony honoring three Pakistani women for their work in the field of gender equality and field of climate change was held on March 8 at the French Embassy. The Gender & Climate Award will be presented annually and was jointly established by the French embassy, Agence Française de Développement (AFD), and the International Union for Conservation of Nature (IUCN) in July of last year.

The organisers hoped that it would continue to highlight the best practises by women in field of climate change and gender equality as well. Along with the first, second, and third place winners of the award, cash prizes worth €3,500 (Dh13,543), €2,500 (Dh9,673), and €2,000 (Dh7,739) were also given.

The event's chief guest, the minister for climate change, congratulated the award recipients for setting excellent examples in agriculture, gender equality, and women's empowerment. "Your experiences are truly an inspiration to other women, and we can all learn a lot from you," she said.

Every year, she claimed, Pakistan bears the brunt of the effects of climate change. In particular, she cited the floods of last year, which rendered hundreds of thousands of people homeless in Sindh and resulted in enormous losses to crops and livestock.

As a result of climate change, she said, we are also about to experience a heat wave, which is another impending disaster. At the French Embassy on Wednesday, Humera Iqbal, the first-place winner, was presented with the gender and climate award by the Federal Minister for Climate Change.

Meeting women who have accomplished excellent work in this particular sector is, in this case, an honour for me, the minister declared.

Later, the minister thanked Ambassador Nicolas Galey in a tweet and referred to the occasion as a chance for women to lead innovation in positions of community leadership.

"I appreciate Amb Nicholas Galey's collaboration with FranceinPak and the IUCN on today's climate and gender awards. These women serve as role models for women by overcoming challenges and driving innovation in positions of community leadership. When it comes to securing vulnerabilities at scale, ClimateChangePK needs allies.

The award, according to ambassador Nicolas Galey, brought attention to positive actions and practical solutions for a more just, equal, and healthy planet, led by women from civil society. It complies with the goal of the Paris Agreement to advance gender equality, justice, and youth involvement in climate action. It aims to encourage more female participation and leadership in climate action.

Access To Digital Services Can Bridge Digital Gender Divide: Experts



Pakistan, according to Ms. Khawaja, is the second-worst performing nation in the world on the Gender Gap Index and ranks 90th out of 122 nations in terms of the digital gender divide.

To bridge the digital gender divide, women must be digitally literate, have access to digital goods and services, and be familiar with e-commerce. Speaking at a seminar on "DigitALL: innovation and technology for gender equality" held here by the Sustainable Development Policy Institute in honour of International Women's Day, Shaza Fatima Khawaja, Special Assistant to the Prime Minister on Youth Affairs, made this claim.

Pakistan, according to Ms. Khawaja, is the second-worst performing nation in the world on the Gender Gap Index and ranks 90th out of 122 nations in terms of the digital gender divide.

She briefed the audience on a number of government-sponsored programmes, such as the Digiskills programme, the laptop programme, and the Digital Pakistan Policy, which included ICT for girls. She claimed that the Ministry of Information and Technology (IT) ran these initiatives to improve the information technology skills of children, men, and women.

She continued, "IT is a market that is rapidly evolving, but the employment prospects of IT graduates remain low due to structural issues in academia." She added that the IT Ministry is working on short courses to meet the industry's demands by upskilling students, ensuring market competitiveness, and increasing employment prospects.

Policies in Pakistan are typically gender-blind, according to Dr. Abid Qaiyoom Suleri, Executive Director of SDPI; as a result, a more inclusive and gendered approach is required when formulating policies.

According to him, FinTech has improved women's access to financial services, particularly through mobile phones, but more than three-fourths of Pakistani women do not have access to the internet. He added that the internet is no longer a safe place for many women. He stressed the need for improving the online safety of women to provide them with a safe and conducive environment...[Read More](#)

PowerChina Completes Mega Hydropower Projects In Pakistan

Diamer Basha Dam Project, which will be the largest RCC dam in the world, is being built by the PowerChina company and is currently Pakistan's largest hydropower hub project.

State-owned Chinese construction firm PowerChina has completed over 100 projects in Pakistan, including a number of significant hydropower projects that are essential to the South Asian nation's energy security.

Through investments in a number of industries, including market energy, electricity, water management, and infrastructure, the company has demonstrated its commitment to Pakistan.

PowerChina's involvement is a part of the Belt and Road Initiative (BRI), and over the past 36 years, it has finished 103 projects in Pakistan, including some significant energy projects like the Gomal Zam Dam, the country's first roller-

compacted concrete (RCC) dam; the Ghazi-Barotha Hydropower Project; the Tarbela 4th and 5th Extension Hydropower Projects; and the Tricon Boston 150 MW Wind Power Project, the country's largest wind farm.

The China-Pakistan Economic Corridor (CPEC), in which PowerChina is a major participant and has already fin-

ished 11 projects, including the first 20 energy and infrastructure projects, is also being celebrated in Pakistan this year on the occasion of its 10th anniversary.

The Diamer Basha Dam Project, which will grow to be the tallest and largest RCC dam in the world, is being built by the company and is currently Pakistan's largest hydropower

hub project. Pakistan is anticipated to receive 18.1 billion KWh of clean electricity annually once the dam is finished. Additionally, the project will create over 20,000 job opportunities.

PowerChina has also invested in clean energy projects as part of its commitment to promoting Pakistan's sustainable development. Power Construction Corporation of China, also known as PowerChina, is a fully state-owned enterprise that is under the supervision and administration of the State-owned Assets Supervision and Administration Commission.

It is engaged in heavy and civil engineering construction. 779 companies make up PowerChina. PowerChina was ranked 157 out of 500 Fortune Global 500 companies in 2020 and 41 out of China's Top 500 Enterprises. The international brands of PowerChina include SinoHydro, HydroChina, SEPCO, and SEPCO III.



Fintech Startup Trukkr Raises \$6.4 Mln, Receives NBFC Licence

Despite a lack of adequate rail and water freight infrastructure, Adamjee told the media that Pakistan's \$35 billion per year trucking industry is expanding at a 10% annual rate.

In addition to receiving a non-banking financial company (NBFC) licence, Trukkr, a fintech startup for Pakistan's trucking industry, announced on Tuesday that it had raised \$6.4 million in a funding round. Trukkr is special in that it offers fintech to digitise the largely unbanked and undocumented industry.

It provides small- and medium-sized trucking companies in Pakistan with a transport management system and supply chain solutions. Accion Venture Lab in the United States and Sturgeon Capital in London took the lead in the seed funding round.

According to a statement from Startup Trukkr, the round also included investors Peter Findley, Al Zayani Venture Capital, and Haitou Global. The company's business strategy has been modified for the Pakistani market but is similar to those used by Kargo in Indonesia, Solvento in Mexico, and Kobo 360 in Africa.

Less than 5% of trucking companies using Trukkr's platform have access to financial services, which means they frequently have to wait up to 90 days for payments, making it difficult for them to pay for costs like fuel, tolls, and truck maintenance.



Trukkr's CEO and co-founder Sheryar Bawany told media that the company planned to introduce financial products with a "reasonable risk adjusted spread" in comparison to the industry standard Karachi Interbank Offered Rate (KIBOR).

About 20,000 drivers, according to co-founder Mishal Adamjee, work for 100 of the largest companies in the nation, including Shan Foods, Artistic Milliners, International Industries Limited, and Lucky Cement.

Despite a lack of adequate rail and water freight infrastructure, Adamjee told the media that Pakistan's \$35 billion per year trucking industry is expanding at a 10%

annual rate. The Covid pandemic, according to investor Accion Venture Lab, demonstrated just how dependent the world is on international supply chains. It said in the statement, "We want to bet on a company striving to address inefficiencies in a market filled with opportunities."

The China Pakistan Economic Corridor is expected to have an immediate impact on the demand for freight transportation, which is expected to double by 2025 and increase six-fold to 600 billion freight tonnes-kilometers by 2050. Trukkr It In, BridgeLinX, and Freightix are three additional freight marketplace startups in Pakistan.

Startups Ecosystem Project Attracts \$355M Investment In 2022

The official declared that Pakistan had become "a paradise for investment in the IT and telecom sectors" over the previous four years.

Under its flagship project of startups ecosystem, which attracted \$355 million in investment during the year 2022, the Ministry of Information Technology and Telecommunication assisted young entrepreneurs.

The State Bank, SECP, FBR, and Intellectual Property Organizations have received policy recommendations from the IT ministry to help the startup ecosystem, according to a Ministry of IT official on Tuesday.

These suggestions will simplify the regulatory framework for the startups ecosystem. He added that Ignite was also creating a startup portal to assist investors in evaluating startups in various industries or topical areas.

And eventually, this will aid investors in making investment decisions. Second, through that portal, the startup can communicate with investors and present their ideas. So, it's a business matchmaking website that will aid in connecting startups and investors.

The official declared that Pakistan had become "a paradise for investment in the IT and telecom sectors" over the



previous four years.

According to him, eight ignite incubation centres have sparked an entrepreneurial spirit in the nation that is assisting in the creation of new startups in almost every industry.

In the previous year, various sources invested \$20 million in the start-ups housed in the nation's National Incubation Centers.

Up to 20 training centres were established across the nation as part of the National Freelance Training Program, which was started and funded

by the Ministry of Information Technology.

He claimed that 8,647 graduates from international standard IT programmes contributed to the economy of the nation by earning \$23 million in freelancing after completing their education.

A total of 1638 new IT companies registered with the Pakistan Software Export Board during the year 2022, along with 761 call centres and 1463 freelancers.

In order to foster more businesses in these sectors and increase exports, he added

that the ministry was also setting up specialized incubation centres in the fields of agriculture and textiles, aerospace technologies, and gaming and animation.

He explained that Ignite was launching an accelerator programme for the provision of early-stage investment to help early-stage startups maintain their operations. In order to help the local startup ecosystem attract foreign investors, Ignite is working with international partners like Plug & Play, Orbit, DMZ, 500 Global, and Hub 71.

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Types:

There are different types of soybeans according to seed colors.

Green soybean: It is also called edamame. It is used to make salads, soup and stir-fries.

Yellow soybean: It is used to make tofu, soy milk, tamari. Producers use yellow soybean.

They play a important role in soy flour for baking.

Black soybean: Black soybean use in traditional dishes. Soybean is a staple food of Asia.

Composition:

Soybean of legume family rich in protein. It contains nine essential amino acids. It is a source of protein for many peo-

iron.

Composition of Soybean oil: Soybean oil contains five fatty acids .Stearic acid 4%,Palmitic acid 11%,Oleic acid 23%, Linoleic acid 1%, Linoleic acid 54%.

Fatty acid of Soybean oil:

a). Fatty acid Composition of saturated

Fatty acid soluble in organic solvent (Ether, Ethanol, Chloroform) . Their melting point increase with increasing Carbon number in chain .Saturated fats are easily absorb in human body because they are very stable and don't react with other molecules due to presence of single covalent bond

ple. Soybean having
40% Protein
20% Lipid
17% Cellulose and hemicellulose
7% Sugar
6% Ash
5% Crude fiber

Soybeans are low in saturated fat and high in Vitamin C.They are also contain of Zn,P,S and

It contains of Lauric ,Mystic , Palmitic acid, Stearic and Arachidic acid. Saturated Fatty acid may contain no double bond (easy to break). They have low melting and boiling points. Fats containing saturated fatty acids are solid
 $CH_3(CH_2)_{14}COOH$. Palmitic acid (C16)

b). Fatty acid Composition of

unsaturated

It has Oleic acid (C18). They have high melting and boiling point due to the double bond's presence. Unsaturated fatty acids are liquid at room tempera- t u r e .
 $CH_3(CH_2)_7CH=CH(CH_2)_8COO$
H. Oleic acid (C18)

Fatty acid soluble in organic solvent (Ether, Ethanol, Chloroform) . Their melting point increase with increasing Carbon number in chain .Saturated fats are easily absorb in human body because they are very stable and don't react with other molecules due to presence of single covalent bond.

Importance and Uses:

Soybean plays an Important role in Human health and in Industries.

a) Beneficial Uses for Human

Soybean is a major source of protein. Unlike other plant proteins, we can obtain all essential amino acids according to our body requirements.

It reduces the Cholesterol level in human body. High level of Cholesterol increase the risk of heart attack. If people eat 1/3 cups of Soybean protein per day, they will reduce the low-density lipoprotein cholesterol 3-4%.

It regulates the blood sugar levels. Some people eat more Sugar on regular basis, having more chance of chronic disease (like diabetes). Soybean doesn't increase the sugar levels. It decreases the chance of cancer.

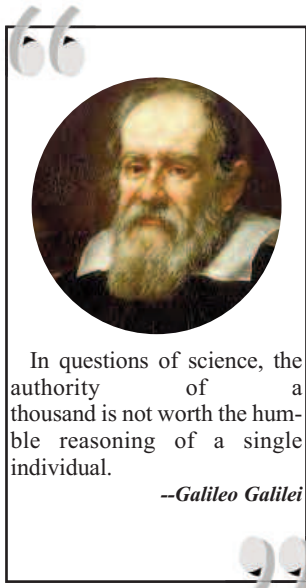
Estrogen promote the certain types of cancer such as breast cancer. Sex hormone of estrogen is a Isoflavones, which is a present in high amount in soybean. Soybean contain high amount of Isoflavones.it might minimum bone loss. Isoflavones may protect this situation in middle aged or old women.

b) Source of animal feed

Byproduct (raw materials and Soybean meal) of soybean also used for animal feed. It is a major source of protein for domestic animals like Chicken, pig, fish feed, cattle and many meals. Soybean meal contributes about 30% to poultry feed. SBM fulfill the feed requirements of animal for amino acid due to the cost effective source of amino acid.

c) Industrial uses

Soybean of legume family also plays an important role in non-food application. It is use to make rubbers, fibers, plastics, coating, lubricants and in consumer products as a ingredient.



In questions of science, the authority of a thousand is not worth the humble reasoning of a single individual.

--Galileo Galilei



Ayesha

Soybeans are a versatile crop that has been gaining increasing attention in recent years for their important role in global food security. As one of the most widely produced and consumed crops worldwide, soybeans are an essential source of protein, fiber, and healthy fats for millions



Role Of Soybeans In Global Food Security

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In this article, we will examine the role of soybeans in global food security and explore some of the challenges and opportunities associated with their production and consumption.

Soybeans are an important source of food and feed, with most of the crops used for animal feed. This is due to their high protein content, which makes them an ideal livestock food source. However, soybeans are also consumed directly by humans, either as whole beans or as processed products such as tofu, soy milk, and soy sauce.

The importance of soybeans for global food security cannot be overstated. Soybeans are grown in over 100 countries, with the most prominent producers being the United States, Brazil, and Argentina.

In many developing countries, soybeans are a critical

source of protein and other essential nutrients, particularly in regions with limited access to animal protein.

One of the critical benefits of soybeans is their ability to improve soil health and reduce the need for chemical fertilizers. Soybeans are a nitrogen-fixing crop, which means they can convert atmospheric nitrogen into a form that plants can use.

This reduces the need for nitrogen fertilizers, which are often expensive and can harm the environment. In addition, soybeans can be grown in rotation with other crops, which helps to break up pest and disease cycles and reduce soil erosion.

However, there are also challenges associated with soybean production and consumption. One of the biggest challenges is the impact of soybean production on the environment.

Soybeans are often grown using intensive agricultural practices, which can lead to deforestation, soil erosion, and water pollution.

In addition, soybean production can be associated with genetically modified organisms (GMOs), which has raised concerns among some consumers.

Another challenge is the impact of soybean production on small-scale farmers. In many developing countries, small-scale farmers struggle to compete with large-scale industrial producers, who can access better technology and resources. This can lead to

the displacement of small-scale farmers and the loss of traditional farming practices.

Despite these challenges, the role of soybeans in global food security remains critical. As the global population continues to grow, the demand for food will continue to increase. Soybeans have the potential to play a vital role in meeting this demand, particularly in regions where access to animal protein is limited.

To address the challenges associated with soybean production and consumption, promoting sustainable agricultural practices and supporting small-scale farmers is crucial. This includes promoting agroforestry, which combines tree planting with crop cultivation to improve soil health and reduce the environmental impact of agriculture.

It also means investing in education and technology to help small-scale farmers increase their productivity and profitability.

In conclusion, soybeans are an essential crop for global food security, providing a critical source of protein and other essential nutrients. However, their production and consumption must be carefully managed to ensure they are sustainable and equitable.

By promoting sustainable agricultural practices and supporting small-scale farmers, we can ensure that soybeans continue to play a critical role in feeding the world's growing population.



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Akasha Shahbaz

One of the most well-known health benefits of soybeans is their high protein content. Soybeans are a complete protein source. This makes soybeans a vital food source for vegetarians and vegans, who may struggle to obtain adequate protein from other plant-based sources



The Health Benefits Of Soybeans

One of the most well-known health benefits of soybeans is their high protein content. Soybeans are a complete protein source.

Soybeans have been consumed for centuries in many parts of the world, particularly in Asia, where they are a staple food. In recent years, there has been growing interest in the health benefits of soybeans, which are packed with nutrients and bioactive compounds that can promote health and prevent disease.

One of the most well-known health benefits of soybeans is their high protein content. Soybeans are a complete protein source. This makes soybeans a vital food source for vegetarians and vegans, who may struggle to obtain adequate protein from other plant-based sources.

In addition to protein, soybeans are rich in other essential nutrients, including fiber, vitamins, and minerals. For example, soybeans are a good source of iron, calcium, and vitamin K, which are all critical for maintaining healthy bones and preventing osteoporosis. Soybeans are also rich in antioxidants, which can help to protect cells and reduce the risk of chronic diseases such as cancer and heart disease.

Another health benefit of soybeans is their potential to lower cholesterol levels. Soybeans contain a type of fiber called soluble fiber, which can help lower cholesterol by binding to cholesterol in the digestive tract and preventing it from being absorbed into the bloodstream.

Soybeans are also a source of phytoestrogens, which are plant-based compounds with a structure similar to that of the hor-

mone estrogen. These compounds have been shown to have various health benefits, such as reducing the risk of breast and prostate cancer and improving bone health in postmenopausal women.

While soybeans have many health benefits, it is essential to note that some people may be allergic to soy or have difficulty digesting it. It is always a good idea to talk to a healthcare provider before making any significant dietary changes, especially if you have a history of food allergies or other health conditions. In conclusion, soybeans are a highly nutritious and versatile food offering various health benefits. Whether you want to increase your protein intake, lower your cholesterol, or reduce your risk of chronic disease, incorporating soybeans into your diet is an innovative and tasty choice.



In addition to protein, soybeans are rich in other essential nutrients, including fiber, vitamins, and minerals. For example, soybeans are a good source of iron, calcium, and vitamin K, which are all critical for maintaining healthy bones and preventing osteoporosis.

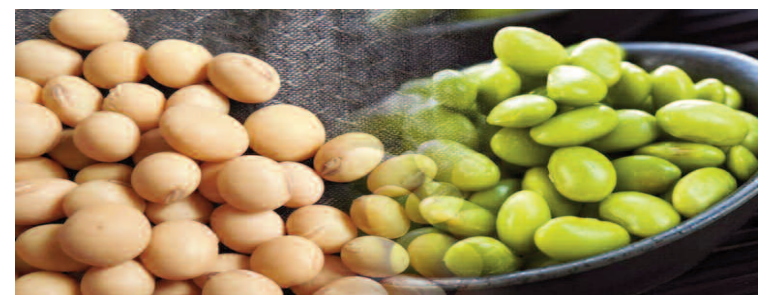
Soybeans are also rich in antioxidants, which can help to protect cells and reduce the risk of chronic diseases such as cancer and heart disease.

Another health benefit of soybeans is their potential to lower cholesterol levels. Soybeans contain a type of fiber called soluble fiber, which can help lower cholesterol by binding to cholesterol in the digestive tract and preventing it from being absorbed into the bloodstream



Anna Ramzan

Soybean can also produce biodiesel, a renewable and environmentally friendly alternative to petroleum-based diesel fuel. Biodiesel from soybean oil produces fewer greenhouse gas emissions than conventional diesel fuel and is biodegradable.



Soybean: The Versatile Crop That Is Changing Agriculture Forever

Soybeans can be processed into protein-rich products, including soy milk, tofu, tempeh, and soy protein isolate.

Soybean is a crop that has been around for centuries, but it has become increasingly popular in recent years due to its versatility and nutritional benefits.

Today, soybeans are one of the most important crops in the world, with uses ranging from animal feed to biofuels to food production. In this article,

we will explore how soybeans are changing agriculture forever.

One of the most significant nutritional benefits of soybean is its high protein content. Soybeans contain all nine essential amino acids, making them a complete protein source comparable to animal-based proteins such as beef and chicken.

This makes soybeans an important source of protein for people following vegetarian and vegan diets.

Soybeans can be processed into protein-rich products, including soy milk, tofu, tem-

peh, and soy protein isolate. These products are often used as meat alternatives and are becoming increasingly popular as more people seek plant-based options.

Soybean is also a major source of animal feed, particularly for livestock such as pigs, chickens, and cows. Soybean meal, the byproduct of oil extraction from soybeans, is high in protein and used as a primary source of animal feed.

Using soybean as animal feed has significantly impacted agriculture, allowing for more efficient meat, egg, and dairy production.

By providing a high-quality source of protein to livestock, soybeans have helped to increase productivity and reduce the environmental impact of animal agriculture.

Soybean is also a sustainable crop with a lower environmental impact than many other crops. Soybean requires less water and land than many other crops, and they can be grown in various climates

and soil types. In addition, soybean is a nitrogen-fixing crop, meaning that it can

convert nitrogen from the air into a form that plants can use,

reducing the need for nitrogen fertilizers.

Soybean can also produce biodiesel, a renewable and environmentally friendly alternative to petroleum-based diesel fuel. Biodiesel from soybean oil produces fewer greenhouse gas emissions than conventional diesel fuel and is biodegradable.

In conclusion, soybean is a versatile crop that is changing agriculture forever. Its high protein content and versatility make it a valuable ingredient in various products, including food, animal feed, and biofuels.

Soybean is also a sustainable crop with a lower environmental impact than many other crops,

making it an important part of the movement towards more sustainable agriculture. As the world continues to seek more sustainable and plant-based alternatives to animal products, soybeans will likely play an increasingly important role in feeding the world's growing population.



This makes soybeans an important source of protein for people following vegetarian and vegan diets. Soybeans can be processed into protein-rich products, including soy milk, tofu, tempeh, and soy protein isolate. These products are often used as meat alternatives and are becoming increasingly popular as more people seek plant-based options



AI In Retail Market Sets To Achieve Valuation Of US\$ 85B By 2033

The market for artificial intelligence (AI) in retail is anticipated to reach a value of US\$ 85 billion by 2033, growing at a notable CAGR of 30.3% from 2023 to 2033.

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In the retail industry, artificial intelligence is ushering in a new era of how businesses track their operations to enhance business strategies, produce better results, and connect with customers online.

Around the world, many well-known retailers are coping with

escalating costs, displeased customers, declining sales, and escalating competition. Retailers are implementing technology solutions as a result to increase operational effectiveness and enhance customer interactions.

Supply chain management, inventory management, customer relationship management, and marketing and branding are just a few of the retail industry's areas that have a lot of room for technological advancement. This will help retailers increase their general effectiveness and profitability.

Due to factors like increased big data analytics and artificial intelligence (AI) knowledge, an

increase in the number of smart devices and internet users, an increase in the amount of data generated by the retail sector, and robust government digitization initiatives, the global artificial intelligence in retail market is growing quickly.

Additionally, the adoption of an omnichannel or multichannel retailing strategy, enterprise needs for streamlining business processes, untapped opportunities to increase sales efficiency, and the growing need to enhance end-user experience and take advantage of market dynamics are all factors that are contributing to the growth of the global market.

The majority of global rev-

enue is under North American control. Retailers in the area are focusing on extracting easily accessible data on customer preferences in order to increase customer service efficiency. The largest market in North America is the United States.

The nation is currently making significant investments in AI technology. The United States is also witnessing the emergence of new small businesses and start-ups as a result of the increased demand for technology.

Europe and Asia-Pacific are developing at the same rate as North America. The retail sector in Asia and the Pacific is changing quickly...[Read More](#)

Denmark Inaugurates CO2 Graveyard To Prevent Warming Of Temperature



Carbon from Greensand project is shipped in special containers to Nini West platform, where it is injected into a pre-existing reservoir that is located 1.8 km beneath surface of ocean.

The "Greensand" project, led by German oil company Wintershall Dea and British chemical giant Ineos, aims to store up to eight million tons of CO2 annually by 2030. It was granted an operating permit in December to begin its pilot phase.

Denmark, the first nation in the world to bury CO2 imported from abroad, launched a project on Wednesday to store carbon dioxide 1,800 metres beneath the North Sea. On the site of a former oil field is the CO2 graveyard, where the carbon is injected to stop the atmosphere from warming any further.

Carbon capture and storage (CCS) projects, which are still in the early stages and expensive, aim to capture and then trap CO2 to reduce global warming.

In Europe, there are currently 30 active or planned projects. However, the Greensand project stands out by bringing in the carbon from a great distance, unlike other projects that store CO2 emissions from nearby industrial sites.

The CO2 is first captured at the source, liquefied, transported (currently by ship, but potentially by pipelines in Greenland's case), and then stored in reservoirs like geological cavities or exhausted oil and gas fields.

The carbon from the Greensand project is shipped in special containers to the Nini West platform, where it is injected into a pre-existing reservoir that is located 1.8 kilometres (1.1 miles) beneath the surface of the ocean.

The neighbouring Siri field will also be used after the pilot phase is finished...[Read More](#)

Researchers Create Mice With Two Male Biological Parents



Turner's syndrome treatment was one of the goals of the research, which was presented at the Third International Summit on Human Genome Editing in London.

Japanese scientists developed seven mice with two male biological parents by fertilising a viable egg with skin cells from a male mouse.

They are hoping that this research, which involves breeding mice with two biological male parents, will advance infertility treatments. This is the first

instance of producing healthy mammal oocytes from male cells, according to the study's principal investigator, Katsuhiko Hayashi of Kyushu University. He continued by saying that it might be usable by people within the next ten years.

Turner's syndrome treatment was one of the goals of the research, which was presented at the Third International Summit on Human Genome Editing in London. One in every 2,000 American women, or more than 70,000...[Read More](#)

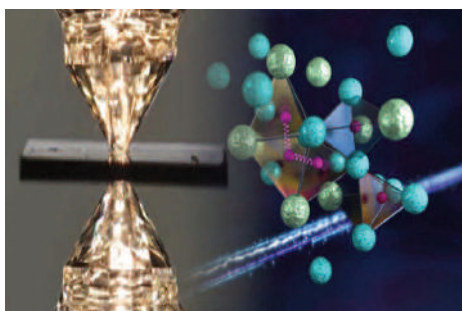
Physicists Claim Creation Of Material With Near Ambient Superconductivity

"The dawn of ambient superconductivity and applied technologies has arrived with this material," the team said in a press release.

Few scientific discoveries would have the same impact on technology as a material that achieves ambient superconductivity at room temperature and under relatively mild pressures.

A team of physicists led by Ranga Dias of the University of Rochester in New York believes they have cracked it, demonstrating that a superconductor, rare earth metal called lutetium combined with hydrogen and nitrogen can conduct electricity without resistance at 21 degrees Celsius (70 degrees Fahrenheit) and around 10,000 atmospheres of pressure, according to the team.

If confirmed by other researchers, this



would be a significant step forward in the development of devices that do not waste energy on heat when producing a current.

In an ideal world, this could be used to develop more efficient computers, faster, frictionless maglev trains, superior X-ray technology, and even more powerful nuclear

fusion reactors. "The dawn of ambient superconductivity and applied technologies has arrived with this material," the team said in a press release. The material has been dubbed 'redmatter' by the researchers due to its dramatic change from blue to pink as it becomes superconductive, and then to red as it becomes a non-superconductive metal.

This team of researchers has published their own observations of a superconductor breakthrough at room temperature. The data has been published in the prestigious journal Nature, and is sure to draw plenty of debate.

One of the main concerns is that a similar claim was retracted in 2020 due to issues with reproducibility and questions over the data. Superconductivity is a big deal because it prevents energy from being lost as heat when electricity flows through wires...[Read More](#)

Use Of Steganography Enables Perfectly Secure Hidden Communications



A team of researchers has created a ground-breaking algorithm for perfectly secure communications using steganography.

For the first time, 'perfectly secure' hidden communications are now possible thanks to research breakthroughs. The technique hides one piece of content inside another in an imperceptible way using recent developments in information theory.

A team of researchers has created a ground-breaking algorithm for perfectly secure com-

munications using steganography, the practise of concealing sensitive information within unimportant content.

The algorithm is a useful tool in digital human communications like social media and private messaging because it can effectively conceal sensitive information so that it cannot be seen that something has been hidden. The algorithm's ability to transmit information in a completely secure manner, according to the researchers, may give vulnerable groups like dissidents...[Read More](#)

Mental Health Of Intl' Students Worsen Amid COVID Pandemic: Study

Asia sends a large number of students to Australia, and those students have spoken out about racial and ethnic discrimination, highlighting how it has gotten worse since the pandemic.

In comparison to domestic students, university students in Australia, especially international students, reported worsened mental health during the COVID-19 pandemic, according to a study published in the journal BMC Psychology.

In the 14,880 student study titled "Changes in mental health across the COVID-19 pandemic for local and international university students in Australia," it was discovered that 70.8% of the participants thought their mental health got worse during the pandemic.

According to Erudera.com, restrictions in Australia during the pandemic were one of the problems that contributed to a decline in the mental health and wellbeing of residents at the time, including international students. Additionally, it was discovered that racism, financial difficulties, and a lack of support all have an impact on students' mental health...[Read More](#)

Audible To Host A Panel Titled Music Storytelling With Audible

The first weekend of the festival will see Audible continue its dedication to music storytelling by bringing fans into the worlds of some of its well-known music franchises. The Audible Sound Studio, an immersive audio experience being developed by Audible for SXSW this year, will feature programming, 7" vinyl pressing, special happy hours, and much more. The first weekend of the festival will see Audible continue its dedication to music storytelling by bringing fans into the worlds of some of its well-known music franchises.

In the Austin Convention Center on Friday, March 10 at 2:30 PM CST, Audible will host a panel discussion titled "Music-Storytelling with Audible: The Art of Marrying Song and Spoken Word" to talk about their upcoming new singing competition podcast, Breakthrough.

The panel discussion will be moderated by Rolling Stone's associate managing editor Angie Martoccio and feature Audible's executive producer of original music storytelling, Preston Copley, as well as Breakthrough stars Sara Bareilles, a GRAMMY-winning musician, and Daveed

Diggs, a GRAMMY- and Tony-winning actor.

Billboard advises leaving the panel and going across the street to the Audible Sound Studio. The Audible Sound Studio, which is situated in the Sunset Room across from the Austin Convention Center and right in the middle of SXSW foot traffic, will be a mecca for everything music storytelling.

When they arrive, festival goers will be greeted by an eye-catching mural painted on the building's exterior by Austin muralist Zuzu that was influenced by each of the three original music storytelling series produced by Audible: Origins,

Words + Music, and Breakthrough.

Audio enthusiasts are taken inside the minds of the Origins artists in a dream-like room by Origins, which kicks off the journey. Attendees can sample audio from the Audible Original while also finding a vibrant photo booth that captures the essence of the Origins brand and an Origins x Ephemeral Tattoo Studio where they can choose a tattoo that will fade over time.

The following area of the Audible Sound Studio highlights the company's long-running Words + Music series, bringing listeners exclusive music storytelling experiences...[Read More](#)

