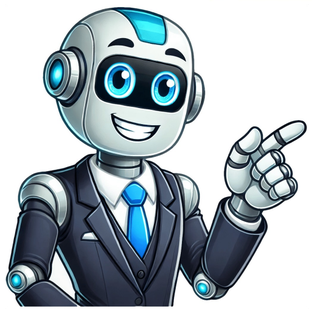
I'm not a bot



Economic value of plants

Spring in North Carolina means gardening season, and it's a chance to celebrate the value that plants bring to people's lives. According to a new infographic, consumer horticulture contributes $196 billion annually to the US economy, creating over 2 million jobs. The graphic is from the National Initiative for Consumer Horticulture, a group of industry leaders in academia, government, and nonprofits. The initiative aims to promote the growth and development of a healthy world through landscapes, gardens, and plants. In North Carolina, horticulture plays a significant role in the economy, with over 1,300 operations and $571 million in farmgate value in 2014. Additionally, more than 14,000 people are directly employed in nursery and greenhouse businesses. The benefits of consumer horticulture extend beyond the economy, enhancing well-being through gardens, lawns, and houseplants. It also has a positive impact on the environment through stormwater management, water conservation, and greenwaste reduction. The National Initiative for Consumer Horticulture aims to promote these benefits and provide research-based educational programs related to consumer and commercial horticulture. Rice, a tropical grass, is an annual crop with a panicle inflorescence containing individual grains. India cultivates various varieties like IR-8, Ponni, Kannagi, Kavery, Ganga, etc. Rice is the primary source of carbohydrates, but polished rice is less nutritious. The husk can be used to extract oil and bio-diesel. Rice is a staple food for half the world's population, particularly in the eastern hemisphere. It's the main source of income for many people in our country. Rice has various uses, including as a breakfast food when flattened and parboiled into flaked rice or puffed up into parched rice (pori). In Japan, sake is an important beverage made by fermenting rice. Bran, a by-product of milling, is used as cattle feed and can be extracted to produce oil for cooking, soap-making, textiles, and leather industries. Paddy husk is used as fuel in brick kilns and brick making. Groundnuts (Arachis hypogea) are annual plants with edible seeds that can be roasted or used to extract oil. Peanut butter is made by grinding roasted kernels. Groundnut oil is a popular cooking medium and salad oil, while the kernel is a rich source of vegetable protein. Economically important uses of groundnuts include animal feed, organic manure, soap making, lubricant, illuminant, and activated carbon production from shells. The plant itself can be used as cattle feed after removing the pod. Cotton (Gossypium barbadense and G. hirsutum) is another fibre-producing crop with a surface fibre extracted from seed coats. It's a crucial material in the textile industry for making products like carpets, blankets, cordages, and rubber tyres. 1. Teak is a cash crop. 2. It produces three main goods: fibre, food, and cattle feed. 3. Lint fibre is used in the textile industry. 4. The seed is used to extract oil, also known as vanaspathi. 5. Cotton flour made from the seed is used for baking. 6. Cotton seed cake is a natural fertilizer. 7. Fatty acids from the oil are used in insecticides and plastics production. 8. Tectona grandis, or Teak, is a large deciduous tree with resistance to termites. 9. The wood has a strong fragrance that lasts for a long time. 10. Teak is an important timber in tropical regions due to its durability. 11. It's used for furniture, buildings, and other construction materials. 12. The timber resists shrinking, cracking, or changing shape when seasoned. 13. Plants are essential for human survival as they provide food, clothing, shelter, and healthcare. 14. The world population is projected to reach 9 billion by 2050, posing a challenge to satisfy basic needs. 15. As income increases, plants become more valuable for high-quality products. 16. The demand for plant-derived commodities is growing rapidly due to urbanization and increasing incomes. Basic needs are met through marketing services as people move from rural areas to urban centers, increasing demand for assembly, sorting, transportation, storage, and packaging of food products. According to the UN Food and Agriculture Organization, major plant commodities traded globally in 1998 had an estimated export value of $156.6 billion. The economic value of plants is determined by market forces, with prices influenced by expected uses and benefits. In most countries, markets operate freely, while in centrally planned economies, governments intervene through state-owned companies and set prices arbitrarily. As international trade agreements increase market openness, the value of plants will likely become more balanced among nations. There are two main types of markets: cash markets and futures markets. Cash markets facilitate immediate transactions between buyers and sellers, while futures markets involve standardized contracts for future delivery. These markets operate globally, with local cash markets linking to regional centers and eventually larger cities. Futures markets have gained widespread acceptance globally, with prominent exchanges in Chicago, New York, and other major cities. These exchanges facilitate trading of contracts for various commodities, including grains, oilseeds, livestock, dairy products, lumber, cocoa, coffee, cotton, orange juice, sugar, and more. Traders operate across the globe, with significant presence in Europe, Asia, Australia, and the Americas. Notably, countries like Brazil, China, Mexico, Italy, and Spain have their own futures exchanges. Interestingly, fruits and vegetables are exempt from futures trading due to perishability concerns. The logistics of long-term storage pose a significant challenge for these products. The agricultural marketing system can be visualized as an hourglass shape, concentrating production into fewer firms for processing and distribution, before reaching individual consumers. Marketing services enhance the value of plants throughout this process, including cleaning, sorting, packaging, transportation, and storage. Farmers typically sell their produce at local markets or to agents of larger buyers. These buyers assume ownership risks, providing essential marketing services to ensure timely, quality, and affordable delivery. The difference between consumer value and producer revenue is known as the marketing margin – the amount charged for these services. As incomes rise and populations grow, consumers demand more convenience-focused products with reduced preparation time. This shift in demand leads to increased marketing services requirements, which, in turn, result in higher marketing margins. Consequently, farmers' shares of consumer expenditures are declining in many countries, as the increase in marketing margins erodes their revenue. Variations in income and geography across countries contribute to these disparities. The farmers' share of consumer food spending in the US has been steadily declining over time. In 1993, this share stood at around 21%, varying between 25% for home consumption to 15% for away-from-home consumption. As income levels increase, it is expected that the farmers' share will continue to decline. This decrease in share does not necessarily imply an inefficient marketing system or unprofitable farming practices. Instead, technical advancements often lead to increased productivity and subsequently lower prices per unit of output. Farmers can enhance their share by adding value to their products, such as through direct sales at farmers' markets, roadside markets, or cooperatives that process and market products like Ocean Spray cranberry juice. This cooperative effort resulted in a highly successful product with strong brand recognition among consumers. Marketing materials often overlook the importance of plants, but resources like All-America Selections / National Garden Bureau's Facebook page and Green Cities: Good Health offer valuable insights into their benefits. Websites such as Nature Sacred, America in Bloom, Trees.com, Human Dimension of Urban Forestry & Urban Greening, Landscape Performance Series, ASLA Health Benefits of Nature, Biophilic Cities, Terrapin Bright Green, American Horticultural Therapy Association, and Therapeutic Landscapes Network provide comprehensive information on the economic benefits of plants and green spaces. This knowledge can be used to educate stakeholders about the value proposition of incorporating biophilic design principles into construction projects, thereby enhancing the quality of life for both homeowners and community members.