



## Agriculture around the World

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**Abstract:** *Agriculture is an integral part of the world's economy. It is one of the most powerful weapons to fight poverty and boost shared prosperity. It is the primary source of employment, income, and food, meeting the basic needs of people all over the world. Increases in agricultural production are key to ending hunger, as well as economic and social development. Today, large amounts of food are traded internationally, making diets across the world much more diverse. Some nations go beyond the domestic markets to explore more of exports and cater to an international consumer base. This paper explores the practice of agriculture in some nations.*

**Keywords:** *agriculture, world, nations, global agriculture, agriculture around the world.*

## INTRODUCTION

Besides clean water, access to adequate food is the primary concern for most people on earth. Feeding the world in a sustainable way is one of our most pressing challenges in the coming decades. The World Bank has projected a growth of almost 9.7 billion in world population by 2050, and identifies agriculture to be the most powerful tool to provide food source for the projected population increase. Agriculture is one of the indispensable sectors of the world economy. It is one of the highest revenue earners worldwide and also one which caters to the food requirement of the world. Agricultural production is not only fundamental to improving nutrition, but is also the main source of income for many. It is crucial to economic growth. It can help reduce poverty, raise incomes, and improve food security for the world's poor who work mainly in farming, living in rural areas [1].

Agriculture is the skill and science of cultivating the soil, producing crops, and raising livestock. It should not be confused with the mere cultivation of crops. Rather it is a broad term that includes not only farming of plants but also farming of animals like cattle and fish. Global agricultural production has changed dramatically in recent decades rapidly as a result of two drivers: the amount of land we use for agriculture has expanded, but there has been a rapid rise in crop yields. Before, food production was localized everywhere: farmers produced food for their families or communities. Now agricultural production has also become international [2].

Figure 1 shows the most popular crops and livestock produced across the globe [3]. The most widely cultivated agricultural commodities worldwide include cow milk, sugarcane, corn, wheat, rice, and potatoes. Of the major cereal and vegetable crops, the United States, China, India, and Russia are the top producers. When it comes to the staples that feed the world (rice, corn, wheat,



beans, lentils, and animal proteins), countries like the United States, Germany, Canada, Brazil, and Thailand feature more prominently. Indonesia exports the most agricultural products globally. In 2020, half of the global agricultural production came from Asia. Every nation is compelled to increase its agricultural productivity due to the increase in population [4].

Figure 2 displays the agricultural regions of the world [5]. Here we consider agriculture in selected seven nations [6-8].

## **AGRICULTURE IN UNITED STATES**

The United States is a superpower in every sector, including the agriculture industry. It is well known for its agriculture science and provides some advanced agriculture technology in the world. It is the best country in agriculture technology. It serves a role model for many nations in the agriculture sector. Agriculture in the US expanded by 5% every year since 1990. The US' expanses of arable land, well-developed infrastructure, advanced technology, and government support together form a competitive advantage. Although agricultural activity occurs in every US state, it is particularly concentrated in the Central Valley of California and in the Great Plains. The mechanization of farming and intensive farming have been major themes in US history. The introduction and broad adoption of scientific agriculture since the mid-19th century contributed to economic growth in the United States. Farmers in the early United States were open to planting new crops, raising new animals and adopting new innovations as increased agricultural productivity in turn increased the demand for shipping services, containers, credit, storage, and the like [9]. Like most countries, the US government heavily subsidizes farming. Farmers constitute a politically powerful group and they receive sizeable legislative support. The United States is the top exporter of agricultural products with \$118.3 billion in exports as of 2019. Corn is the largest crop produced. This is followed by soybeans and wheat. Other major crops are sugar cane, potatoes, coffee, sugar beets, and bananas.

## **AGRICULTURE IN CHINA**

China's land is highly employed for agriculture. Since China needs to feed the largest population on earth, the Chinese government attaches great importance to agriculture. The development of agriculture over the course of China's history has played a key role in supporting the growth of one of the largest populations in the world. In the 20th century, China struggled to feed its large population with farming being very labor-intensive. Following the Chinese Communist Party's victory in the Chinese Civil War, control of the farmlands was taken away from landlords and redistributed to the 300 million peasant farmers. By upgrading farming policies and technologies, China has become self-sufficient and is able to increase farming production and efficiency. Since 1994, the government has instituted a number of policy changes aimed at limiting grain importation and increasing economic stability. As China continues to industrialize, vast amounts of agricultural land are being converted into industrial land [10]. The biggest farm in the world (in terms of acreage) is in Heilongjiang, China; the farm manages 22,500,000 acres. China was the leading agricultural producer worldwide in 2020. It is the largest rice-producing nation in the world. It is the largest producer and exporter of garlic. It exports garlic to the United Arab Emirates, the United States, Vietnam, and Indonesia. China is also the largest producer of many vegetables including onions and cabbage. In addition, China produces soybeans, kaoliang (sorghum), wheat, millet, and corn.

## **AGRICULTURE IN INDIA**

India is regarded a global agricultural powerhouse. Agriculture is the primary source of income for half of the population. 59% of the workforce makes a living from agriculture. The sharp rise in food-grain production during India's Green Revolution of the 1970s enabled the country to achieve



self-sufficiency in food-grains and avoided the threat of famine. India is ranked first in the production of milk, second in dry fruits, third in fish production, fourth in egg, and fifth in poultry production worldwide. Indian is the largest producer of most of the fruits in the world that includes bananas, guava, mango, lemon, papaya, and vegetables. India also produces spices that include ginger, pepper, and chili. India is also the world's largest wheat-producing nation. Farmers in India are happy to be able to feed their family and give education to their children. Raising productivity per unit of land will need to be the main engine of agricultural growth as virtually all cultivable land is farmed. Rural development may benefit the poor, landless, women, scheduled castes, and tribes. Major reform and strengthening of India's agricultural research and extension systems is one of the most important needs for agricultural growth. Since agriculture is India's largest user of water, increasing competition for water between industry, domestic use, and agriculture has highlighted the need to plan and manage water on a river basin and multi-sectoral basis [11].

## **AGRICULTURE IN EUROPE**

The agricultural sector is one of the main land users in Europe and thus shapes landscapes in rural areas. EU agricultural policy has had a strong economic dimension. Agricultural land plays an important role in land use patterns across the EU. European agricultural practices greatly affected the New England landscape. Colonists brought livestock over from Europe which caused many changes to the land. Grazing animals required a lot of land and food and the act of grazing itself destroyed native grasses, which were being replaced by European species. Two of the main challenges confronting agriculture in Europe are climate change and land take, i.e. the conversion of land to settlements and infrastructure. Thus the proportion of total land accounted for by agricultural land is shrinking. In recent years, the agricultural sector has been increasingly affected by extreme weather events [12]. France is considered to be the agricultural center of Europe for many years. All over the EU, France is the top producer of oilseeds, cereals, sugar beets, milk, wine, and beef. Germany's leading agricultural food includes pork, poultry, potatoes, milk, cereals, beef, sugar beets, cabbages, barley, and wheat.

## **AGRICULTURE IN BRAZIL**

Brazil is a major agricultural and industrial power. It is strongest economy in Latin America and the Caribbean. Brazil is historically one of the best agricultural nations on which its economy based. The southern part of Brazil has a semi-temperate climate, higher rainfall, more fertile soil, more advanced technology, adequate infrastructure, and more experienced farmers. This region produces most of Brazil's grains, oilseeds, and exports. The nation is expanding its agricultural land, which in 2020 was about one-third of Brazil's total area. In the same year, Brazil produced one-third of the world's production of soybeans, coffees, and oranges. It is the main producer of coffee, sugarcane and citrus, and the second-largest soybean, beef, and poultry [13]. Brazil is the world leader in the production of sugarcane, which used to be the nation's initial production priority. Large sugarcane production in the nation is promoted by mechanization. Brazil eventually became the globe's largest exporter of coffee, soybeans, beef, and crop-based ethanol.

## **AGRICULTURE IN NIGERA**

Agriculture contributes a significant amount to Nigeria's economy and engages about 70% of the labor force. When Nigeria got its independence in 1960, food exports made up more than 70% of the country's Gross National Product (GNP). Over the next four decades, the situation reversed, with food items accounting for over 50% of imports. Along with crude oil, Nigeria relies on the agricultural products it exports to generate most of its national revenue. Agriculture in Nigeria comprises four sub-sectors: crop production, livestock, forestry, and fishing. Maize, cassava, guinea corn, and yam are the major crops farmed in Nigeria, with 70% of the households engaged in crop farming. Nigeria is the top exporter of cocoa beans. It exports cocoa beans to the Netherlands,



Indonesia, and Belgium. There are several factors in the Nigerian agricultural sector that may prevent its growth. These include a land tenure system that limits access to land, the country's level of irrigation development, limited adoption of research findings and technologies, the manners of fertilizer procurement and distribution, storage facility effectiveness, and the amount of access to markets [14].

## **AGRICULTURE IN UGANDA**

Ugandans were driven by a desire to rebuild and rehabilitate everything that had been damaged during the war in 1986. The widespread adoption of organic agriculture across the country was one of the outcomes of this endeavor. Ugandan farmers were engaged in organic agriculture because of its low input costs as well as its resource-saving and environmentally friendly benefits. Today, Uganda is a leader in African organic agriculture. Its main organic exports include coffee, cotton, dried bananas, pawpaws, pineapples, passion fruits, chillies, ginger, fruits, vegetables, and vanilla. In 2019, the Rural Organic Agricultural Training College (RUCID) became the nation's first college solely dedicated to the education and research of regenerative and organic agriculture. Commercialization of agriculture sector is impeded by farmers' limited use of fertilizer and quality seeds, and a lack of irrigation infrastructure. Investment opportunities exist in Uganda's agriculture sector. Investors consider Uganda's agricultural potential to be among the best in Africa, with low temperature variability, fertile soils, and two rainy seasons over much of the country, leading to multiple crop harvests per year [15].

## **BENEFITS**

Agriculture is one of the largest and most significant industries in the world. It serves as the backbone of the economy of any country. It is vital to feeding the world population and is a key component to the economy in many nations. It supplies most of the world's food and fabrics. It enables people to produce surplus food. Figure 3 typically shows how people around the world make a living from agriculture [16]. A country with a strong foothold in agriculture production can allow for greater stable economic development of a country. To increase agricultural productivity, developed countries are turning to genetically modified seeds to increase yields. Although agriculture is no longer a major employer in North America or Europe, food security remains a global problem. Nearly one-third of the world's farms have adopted more environmentally friendly practices while remaining productive.

## **CHALLENGES**

Humankind is facing enormous challenges in feeding everyone on the planet.

Agriculture in the 21st century faces multiple challenges: it has to produce more food to feed a growing population with a smaller rural labor force, more feedstocks for a potentially huge bioenergy market, contribute to overall development in the many agriculture-dependent developing countries, adopt more efficient and sustainable production methods, and adapt to climate change. As shown in Figure 4, population is increasing and food production must increase [17]. The world depends on increasing food production to feed a projected 9.7 billion people by 2050. Food security continues to remain a central issue for a lot of countries. Nothing causes political unrest more than food deprivation. Importing foods from other nations raises the prices of the food commodities. This is why agriculture is perhaps the most heavily subsidized sector in the world. The subsidies are aimed at helping farmers produce sufficient quantities and acquire modern farming tools [18].

Agriculture is a primary driver of inflation. Russia's invasion of Ukraine has accelerated a global food crisis that is driving millions more into extreme poverty and hunger. Nearly 2 billion tons of food ends up as waste every year due to strict sell-by dates, overconsumerism, and poor storage facilities. Agriculture has large environmental impacts. Our food systems are responsible for about





30% of greenhouse gas emissions. The systems also threaten the health of people and generate unsustainable levels of pollution and waste. Agriculture is the biggest user of water since it claims 70% of the world's water resources. There are farmers around the world who are committed to restoring their environment through organic and regenerative farming practices. The largest obstacle we face in rural areas is inadequate access to sufficient infrastructure needed to deploy network connectivity. Farmers face global competition and has to run their farm as efficiently as possible. As a result, they are always improving and trying out new innovative technologies such as in crop protection and seeds, nutrient management, and drip irrigation. They experiment with different seed, pesticides, and fertilizers.

## CONCLUSION

Feeding the population is a basic and central goal of any economy. Agriculture is the main source of livelihood for a majority of rural people and is often referred to as the mainstay of the economy of the developing world. The role of agriculture production and consumption in world economic development has gone through significant progress. For many around the world, farming is a serious business. It is vital to food security and also represents a sizeable share of some nations' gross domestic product. Agriculture still has a strong hold on the hearts and minds of people around the world. More information about agriculture around the world can be found in the book in [19-24].

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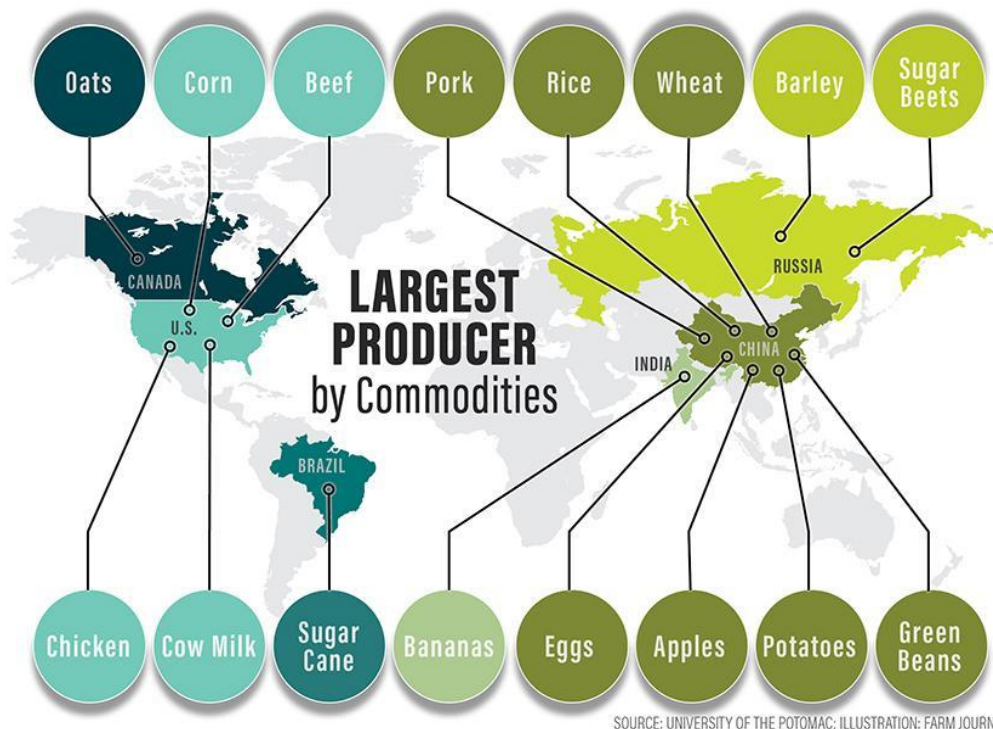


Figure 1 The most popular crops and livestock produced across the globe [3].

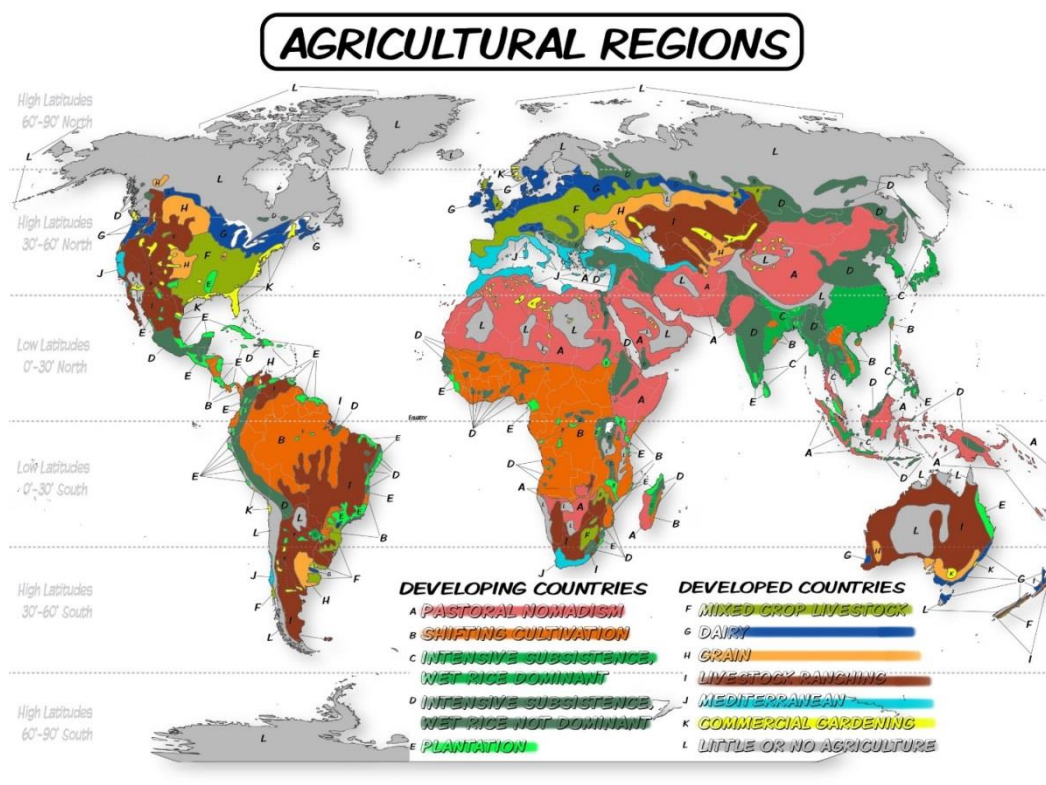


Figure 2 Agricultural regions of the world [5].





Figure 3 People around the world make a living from agriculture [16].

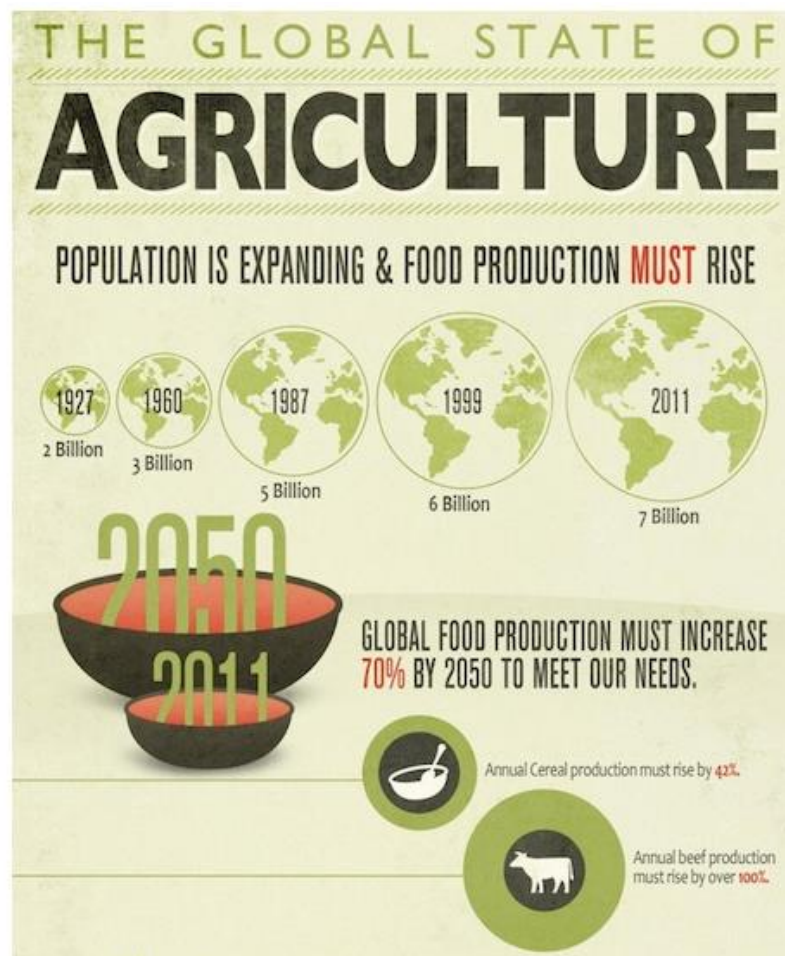


Figure 4 Population is increasing and food production must increase [17].