Better production, better nutrition, a better environment and a better life.
World Food Day

It’s YOUR day! Every year on 16 October, people from more than 150 countries come together with a common goal to raise global awareness and action to end hunger and ensure healthy diets for all. On this day back in 1945, nations across the world united with this common goal and founded FAO. This year, become a food hero and join the global celebration!

Acknowledgements

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Today’s lesson won’t be like any other. It will be a journey across the complex system of food and agriculture.

Are you ready to go? Ready to travel? Where will we start?

Let’s begin with the simple and ancient gesture of planting small seeds in the ground. Did you know that agriculture has existed for 10,000 years? The act of caring for a seed gave rise to a great revolution. Since then, men and women have slowly started changing the world in which they live.

We should never forget that, in the world, each and every part has the power to change the way the system works. Some parts move slowly, and others fast, triggering other movements and bringing about new transformations. Plants, birds, and even rocks participate in their own way in this constant movement on Earth. Just like living organisms, every single detail in the world counts and every action has one or more effects.

In short, we are all connected.

Setting up a vegetable garden in the classroom or on the school grounds is a fun and educational activity that’s suitable for all ages. Do you have one? You can start by studying the spaces available to you. Is there enough light and at what times of day? Think together about the vegetables you would like to grow and check if it’s possible. You could even ask professionals, specialised volunteers or your family for help. Whether it’s in a pot or in open land, there’s always room to plant a few seeds. (For more information visit www.fao.org/school-food)
If you’re between the ages 5 to 19, we want you to use your imagination and create a poster of a food journey.

Three winners in each age category will be selected by our jury and announced here in December. Winners will be promoted by FAO offices around the world and receive a surprise gift bag and Certificate of Recognition.

The deadline for entries is 5 November 2021.

Find out more on: www.fao.org/world-food-day/youth/contest/en/

The world is a system, in other words, a unit composed of many elements working together. When agriculture first began, humans could never have imagined how farming could bring complex systems to life over thousands of years all around the world.
An **agri-food system** is a set of actions that are all linked. It starts with farming and continues to the products that arrive at our homes, all the way to the things we eventually dispose of back into the environment. The cycle includes goods of all kinds because agriculture, as we shall see, does not only produce food but also other products.

The Food and Agriculture Organization of the United Nations (FAO) works with over 190 countries to improve nutrition. One of its main objectives is to study this huge mechanism and improve it at its core. In this book, we will try to understand how agri-food systems work and how we can play a part in making them function better.
The journey of seeds

Agriculture also includes fishing, animal farming, forest production, the production of plant materials to make textiles and much more. None of these activities are separate, so let’s start by talking about seeds. In nature, the air scatters seeds and helps them find new ground to grow, or if dropped in water, seeds are swept away to another destination. Often, animals who eat fruit carry seeds far away with their droppings. A long time ago, farmers used to keep the seeds from their best plants to replant cereals and vegetables. These days, people who cultivate the land can either produce their own seeds or buy them from seed companies, which are actually real industries.

So seeds can be industrial products? What does this mean? It means that there are big farms where cereals and vegetables are only farmed for the purpose of collecting seeds, which then produce plants with specific characteristics. Eventually, these seeds are packaged and sold all over the world. They need to be registered and certified so that people can easily identify them by name, origin and method of production.

Citrullus Lanatus, or watermelon, is a plant native to tropical Africa. Although you may only be familiar with one type of watermelon, over 1000 varieties exist. They differ in weight, size and in the colour of their pulp. In 2008, the Global Seed Vault was inaugurated on the Svalbard Islands in Norway to preserve different seeds from all over the world, a treasure that may otherwise have risked being lost.)
In the past fifty years, the cultivation of many different crops was set aside to make room for a small number of fast-growing crops to produce greater quantities of food.

A healthy agri-food system, however, needs to guarantee biodiversity, or in other words, keep a variety of species alive. It’s important to limit monoculture, or growing a single species, by continuing to cultivate plants and grains that are native to local territories. This guarantees a variety of food for a healthy diet and benefits the land. Biodiversity also attracts bees and birds – the natural enemies of parasites, meaning fewer pesticides are needed.

Nature needs variety
Cultivation starts as soon as a seed or seedling reaches the farm. This is an important step. In a healthy system, products grow without weakening the soil or needing dangerous pesticides and fertilizers.

Farm products like fish and meat can be consumed by people that live near farms... ...or they go on long journeys to distant places ...or they are bought by food industries that process them... ...and process them more ...and more.
A large part of agricultural production is destined for animal feed (mainly composed of corn and soy) for livestock.

Primary material for the textile industry is also grown in fields like cotton, linen, hemp and soy is grown to make plant fuel. Cultivated forests provide wood for the paper or furniture industry.

The agri-food system doesn’t only deal with food
When products are ready, the distribution phase begins

Fresh produce can travel in simple boxes on trucks to reach local markets, restaurants, hotels or purchasing groups. It is usually already washed but must be washed again and then cut or cooked in order to be eaten. Fresh food doesn’t require a lot of packaging, and if the land it comes from is healthy, it’s usually even tastier.

Often, however, small-scale farmers suffer losses. They lack modern tools or fridges, or the capacity to predict how their products will sell. If the cost of vegetables drops, for example, it may not seem worthwhile to harvest the fruit or vegetables, and they may be left to rot.

If food products are sent far away, it is washed and packaged even more. Some salads, for instance, are treated with preservatives to keep them fresh. In fact, they can be eaten straight from the packet. It’s handy, but food that travels so far is usually not as rich in valuable nutrients as fresh food. And then, what do we do with all the packaging?
Foods that have been processed and are ready to eat are often packaged multiple times. Sometimes packaging takes up more space than the food itself. Long journeys also mean a loss of fuel and water consumption, and a waste of resources.

Have you ever asked yourself who makes food packaging? The food industry assigns the design of boxes, bags and all advertising to agencies that work hard to get people to know about their products. Even videos, billboards or ads about what we eat are part of the agri-food system.

Many governments force companies to record product information on food labels: ingredients, nutritional information, where the product was produced or processed, and where they were packaged. Even non-food products have labels.

Paper, for instance, can come from controlled and sustainable tree cultivations. You should read labels carefully to be sure about what you are buying.

Most packaged food and goods travel by lorries, boats or even planes for mass distribution. They reach shops, local markets, supermarkets, shopping centres but also big restaurant or hotel chains.

As you can see, this is a long journey with many stages. Agri-food systems provide work for a billion people around the world – more than any other sector of the economy. And since we all need to eat (some more, some less, some better, some worse), this sector concerns the whole world.
Find three positive and negative examples of an agri-food system and explain why.
We are all connected!

The way in which we produce food affects the entire planet, our natural resources, the way animals live, and the climate. Just consider the fact that we drink two litres of water a day, but 3000 litres are needed to produce what many of us eat on a daily basis.

Right now, agri-food systems are responsible for one third of carbon emissions that cause the greenhouse effect and climate change. Intensive agriculture can occupy a lot of space, destroying the natural habitats of many species. Chemical pesticides reach rivers and lakes, and finally end up in the sea. This has a negative impact on the fishing sector as well.

Besides this, the production of fertilisers consumes fossil fuels such as oil, releasing a lot of CO2 into the air. Intensive animal farming for meat and milk production requires a lot of space and vast areas of cereal farming for animal feed. Did you know that a cow that doesn’t eat the right food can create a lot of pollution? Farming animals in a responsible way is fundamental to reducing pollution and using water and other natural resources in a more sustainable way.

Food processing is often a way to limit food waste. After all, cheese, jams, dried fish and meat are ways of preserving food so they last longer. When, however, processing becomes excessive and chemical preservatives are used, the food we eat loses nutritional properties. Food that has been highly processed is not nutritious, even if it seems that way.

In many cases these ultra-processed foods are made with cheap and unhealthy ingredients that you would never find in your cupboard. When all you can afford is poor quality food, you often get sick and this is very unfair. Today, two billion people are severely overweight or suffer from obesity. Malnutrition, which includes hunger but also obesity, affects more than 3 billion people in the world. FAO is working with countries to reduce this figure to zero.

But what can be done? There are solutions...
We need to persuade governments to encourage the sustainable production of affordable and nutritious food by providing incentives for environmentally friendly behaviour and helping small-scale farms. These are, in fact, the most at risk of poverty in the event of natural disasters or emergencies. Small-scale farms produce 33% of the world’s food and often don’t earn enough. In addition, in poor and rural areas, women are the least paid category of all. It is only fair to support them. Governments need to invest in their education and they should have a say in decisions that concern them.

The COVID-19 pandemic has proven that we all have to work together for change. For example, due to the crisis, small farmers worked even harder than usual to sell their harvests. They only escaped poverty where governments found solutions to support them.

Agri-food systems are linked to health, education and even finance. The private sector – companies, banks and donors – has to make responsible investments. It has to fund sustainable projects and innovation in the search for new and more eco-friendly ways of crop farming, fishing and animal farming.

In September 2021, the Secretary-General of the United Nations will convene the first Food Systems Summit. This great gathering of leaders, researchers, private and international organizations will decide on courageous actions to change the way food is produced and consumed in order to reach the Sustainable Development Goals (SDGs) – read more on page 22.

Naturally, our help is also needed to stop climate change, defend the environment and combat injustice.
Everyone’s effort is needed to change the situation. But how? Where can we start?

There are four key steps: we have to be committed to better production, better nutrition, a better environment and a better life for all.

Better production respects small farms, soils and occurs without waste or unfair labour.

Better nutrition is achieved when a large variety of healthy food is available at the right price: nobody goes hungry and nobody gets sick because of what they eat.

In this way, you create a better environment, where crops don’t impoverish the land, biodiversity is maintained and aquatic life respected.

14% of food in the world is lost because of poor harvesting, storage and transport. Another 16% is wasted by sellers, restaurant chains and consumers. Think about all the labour and water that goes into food that nobody actually eats.
It's clear that all of this contributes to creating a better life for all men, women and children - one that is fairer, healthier and more beautiful. An agri-food system that doesn't pollute, in which nothing is wasted and where the rights of workers are respected is a safe and healthy system. It can recover easily from difficulties such as natural disasters or epidemics.

Now, let's get to work! We also have a contribution to make. Do you know who food heroes are? They are the people who dedicate themselves to improving our agri-food systems.

There are food heroes all over the world: you can become one too.
Our four improvements

For better production
We too, young and old, can influence governments and private companies by buying responsibly, talking about sustainable food at home or at school and educating ourselves. Let’s read product labels, pick healthy, fresh, organic, seasonal food, and, if possible, food that is produced close to where we live. Buying is a choice that has an impact on everyone’s health and on the planet’s health too.

For better nutrition
Let’s watch our diet. Ultra-processed foods can be very tasty but they’re high in fat, heavy, very salty or far too sweet, and full of preservatives. They don’t contain nutritional properties that are necessary for a healthy living. Let’s try to have a varied diet without ever forgetting fruit and vegetables. Let’s avoid eating too much meat by replacing it sometimes with pulses or an all veggie meal. Let’s pay attention to hygiene by washing vegetables and our hands when we eat. And, if we can, let’s grow our own vegetables at home or at school.
For a better life
Our life only improves together with other lives: those belonging to men and women, plants and animals. This may not be obvious to us at first, but sooner or later it makes sense. We might know and then forget, but a single exceptional event is all it takes to remind us that we really are all part of one world. Food cannot be a source of injustice and destruction because it is connected to everything. It is life, culture and joy. Giving value to what we eat means respecting oneself, others and the planet.

For a better environment
Let's reduce waste. Keep an eye on what's happening at home, at school or in the restaurants you go to. Learn how to read expiry dates on products. If we see a ‘Use By’ date on a label, it means that the product can no longer be eaten the day after that. On the other hand, ‘Best Before’ means that the product can still be eaten the next day even if it's not in the best condition. Try to consume what we buy and only buy what we really need. How is waste managed in our area? If sorted waste collection is not possible where we live, let's to recycle fabrics and containers.
Activities

Do you like writing stories?
Each product has a story. Some of it is written on the label, the rest can be imagined. Try to write a story in which you recreate the journey taken by a food product to reach you. You could even let the food speak for itself.

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Are you more of a journalist?
If there is a street market near you, why not interview the sellers. Ask them how far their products have travelled. Try to trace it on a map. You could also write an imaginary interview with a carrot or a type of bread. Let them describe their journey from farm to table by themselves.

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Or do you prefer drawing?
Imagine the story of a vegetable, cheese, jam or whatever you prefer in the form of a comic strip. (Don’t forget that there’s a Poster Contest especially for you. See page 3 for more information).
Peter Rabbit Food Hero

As we have seen, #FoodHeroes are dedicated to improving the way food is produced, our diet, our environment and our life. Peter Rabbit is now one of them as #PeterRabbitFoodHero.

By following his example, you can discover how to help the planet by eating more fruit and vegetables. You can also buy food locally, where possible, or grow vegetables at home or at school. There are many actions that can improve the lives of everyone everywhere. Discover more at: www.fao.org/world-food-day

The United Nations has established 17 Sustainable Development Goals to reach by 2030. As food is linked to the future of our planet, FAO is committed to many of these objectives. A significant milestone is SDG2, Zero Hunger, which we all have to work towards. Zero Hunger means defeating all types of malnutrition: a lack of food but also obesity and other illnesses that are caused by the wrong type of diet.

Find more information on the SDGs here: www.worldslargestlesson.globalgoals.org

What does sustainable mean?

It means that the actions taken to produce a commodity, service or object don’t have negative effects on the planet. It means that the Earth’s future inhabitants will thank us.
INSTRUCTIONS

Now that you have completed the Activity Book, we want you to become a Food Hero by doing your part.

Follow the steps below to complete your Food Hero Passport:

1. Carefully tear out the passport on the right.

2. Fill in the details on the inner left page.

3. Draw a picture of yourself or glue a photo in the box provided.

4. Take a Food Hero pledge. Choose 1-3 actions to commit to and write them down in the space provided in your passport. Get some inspiration from the actions in this activity book, or think of some of your own! Then sign your declaration.
Activity Book Series

You can download the FAO Activity Book Series on our “Building the #ZeroHunger Generation” portal together with a range of material to support educators and parents in the preparation of activities or classes on important global issues at the core of FAO’s work: www.fao.org/building-the-zerohunger-generation

► Food Heroes
► Healthy Plants
► Eating Healthy Matters
► Your Guide to FAO
► Change the future of Migration
► Climate is Changing
► Working for Zero Hunger

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