

Grassroots Environmental Education
Kids Discovery Series
Module Six: More About Food
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In the last module we talked about where the ingredients for a pizza come from – the pizza crust, tomatoes and cheese. We learned that the flour, vegetables and cheese we buy in the grocery store can come from farms a long way away.

What is it like on those farms, and how have they changed over time? In this module we'll learn about how plants are grown, how animals are raised for food, and some of the problems that have developed because of the methods we are using today.

First, we left out an important ingredient that some people love to have on their pizza – something that's tasty and provides us with protein. It's meat. Meat is a food high in protein, and that keeps our stomachs fuller for longer than other kinds of food, so eating some meat can be part of a healthy diet.^{1,2}

Where does meat come from?

Meat comes from animals, specifically the muscles of animals. For example, beef and steak come from cattle, pork and bacon come from pigs, and the meat from birds like turkeys and chicken is called poultry.³ There are also processed meats, such as salami or hot dogs or chicken nuggets, where meat is combined with other things.

While meat can be great on a sandwich or part of your dinner, many people who care a lot about animals and the environment choose not to eat it at all. Why would someone make that choice?

Some meat comes from small farms where animals have plenty of space to roam and graze on grass and are fed good food, but most meat comes from "factory farms" – really big farms with thousands of animals.⁴ On these farms, the animals are kept in pens very close together, with not a lot of room to move around.⁵ And the food they are given is generally not good quality.⁶ They're raised to grow quickly and put on a lot of fat. This means they will provide as much meat as possible when they are processed.

Cow Farts

Factory farms also create problems for the environment.⁷ For instance, let's talk about farts. Cow farts and burps are a real problem. Why? Well, cows have special bacteria in their digestive system that breaks down their food. This creates methane gas inside the cow. When the cow farts or burps, that methane comes out and ends up in the air.⁸

Apart from the smell when this happens, methane gas isn't good for our environment. In fact, methane is a stronger greenhouse gas than carbon dioxide because it has a much higher heat trapping ability.⁹

A single cow may not add all that much methane to the air. But a lot of cows - like the thousands in just one lot on a factory farm?¹⁰ THAT can make a big difference to our atmosphere and our climate!

Animal Poop

And here's another thing: a lot of animals means a lot of animal poop. In some cases, farmers can use that poop as manure, which can be a great fertilizer if you spread it on a field. Chicken manure is sometimes used to make lawn fertilizer.

But if the manure isn't used properly, the nutrients and good bacteria in the manure can end up polluting nearby water, like streams and rivers and lakes.⁵ That's bad, especially if that lake or river is a drinking water supply.

Non Meat Eaters

Knowing all of this, some people choose not to eat meat at all. These people fall into two categories:

- A **vegan** diet is one that avoids anything that is produced by an animal, including milk, cheese and eggs. Vegans also avoid using items made from animals, like leather or even honey.
- A **vegetarian** diet is one that avoids any meat, but still includes other animal products, like dairy and eggs.

Some people eat meat, but only meat that comes from animals that are treated well and are fed healthy food. For example, some small meat producers make sure their animals have a better diet and plenty of space to roam around. These farms are called "free range" farms. It's healthier for the animals and for the environment.

Monocrops

Like meat, many vegetables and grains are also grown on giant factory farms. Instead of one farm planting several types of vegetables, like you might have in your garden at home, many big farms specialize in growing just one crop. Rows and rows of corn, or soybeans, or wheat, for as far as you can see.

When you grow just one crop, it's called a "monocrop." Growing plants this way helps farmers to be experts in just one thing – they know their crop really well and can buy specialized machines made just for that type of crop.¹¹ Sometimes they even get money from the government to help keep that one crop growing and sell it at a good price.^{12,13}

But there can be some problems with growing a monocrop.

Imagine you are a bug that loves corn, flying around looking for something to eat. If you find a garden with some corn and also a lots of other vegetables, you'll have something to eat, but you won't cause too much damage to the whole garden. But if you find a farm with acres and acres of corn, you'd probably invite your whole family and settle in for a big meal, spreading around the whole field until you've done a lot of damage to the crop.¹¹

Farmers understand this, but instead of planting a variety of crops, many farmers decide to protect their monocrops with man-made chemicals. These chemicals, called pesticides, kill the pests that might eat or damage the crop.¹⁴

Using pesticides might sound like a good solution, but it's not that simple. It turns out that pesticides do other things that are bad for people and the environment.¹⁵

For one thing, a lot of pesticides are really toxic to people. Many have the skull and crossbones on their labels, which means they are poison. So, if farmers don't put the pesticides on their plants really carefully, they could get really sick.¹⁶ And people living near the farm could get sick from a drift or runoff of pesticides being used.

For another thing, pesticides often kill good bugs too, like pollinators.¹⁷ Pollinators, like bees and butterflies, take pollen to and from all kinds of flowers, including the flowers of fruits and vegetables like little yellow tomato flowers or big orange squash flowers or white apple blossoms. The flowers can become fruits and vegetables only if they are

pollinated. That's why pollinators are so important for making this natural process happen and they need to be protected from pesticides.

Lastly, pesticides might end up in the wrong place, like streams, rivers, lakes, soils, and in the air.¹⁵ They can harm fish, kill the good bacteria in soils, and also show up in our drinking water. When they end up in the wrong place, it's not good for our health or the health of the planet.

Growing Organically

Some farmers grow their food in a way that's much better for the environment. These farmers use more natural methods to control pests. They usually grow a variety of crops, use natural materials (like the animal poop we talked about before) to improve their soil, and take advantage of nature's own solutions to help them prevent pests and grow healthy food.¹⁸

Food from these farms is called "organic," which means that the fruits or vegetables were grown without any man-made chemical pesticides.¹⁹ More and more farmers today are using organic methods to grow food. Many people believe organic food tastes better, and they want to avoid eating any food that might have any left-over pesticides on it.

Conclusion

You have a lot of choices when it comes to food, and the choices you and your family make can make a big difference for the environment. Whether you're a meat eater or vegetarian, it's important to know where your food comes from and the role food plays in the environment and in keeping our bodies healthy.

Review Questions:

- 1.
- 2.
- 3.

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4. "[Factory Farming](#)," Published by Academic Kids Encyclopedia.
5. "[Factory Farm Nation: 2015 Edition](#)," Published by the Food & Water Watch, May 27, 2015.
6. "[11 Facts About Animals and Factory Farms](#)," Published by DoSomething.org
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12. "[Farmers Got Billions From Taxpayers In 2019, And Hardly Anyone Objected](#)," by Dan Charles. Published by NPR, December 31, 2019.
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14. "[Pesticide](#)," Published by Kidzsearch.
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