



# Food

Where does our food come from? If you were to say, “the grocery store,” you’re not wrong, but that’s not the whole story. A lot of work goes on behind the scenes to grow our food and process it before it ever gets to the store. In fact, your food has almost certainly been traveling a considerable distance – and the last stop is when it gets delivered to the store. In this module, we’re going to follow a popular food and find out how it gets to your table.

Pizza seems like a good food to track. The main components of this favorite Friday night dinner are the crust, tomato sauce and cheese. But for each of these three layers, the ingredients need to be grown by a farmer, then processed, transported, and layered together to make a delicious pie.

## The Crust

The pizza crust is made from mixing together flour, water, yeast, and salt. The flour is a really important ingredient.<sup>1</sup> If you’ve ever baked before, you know that flour goes into a lot of different foods, like pasta, bread, cereal, cakes and cookies.

It’s easiest to buy flour in the grocery store, because it takes a lot of work to try and make it from scratch. You would need a whole field of wheat, which is a kind of grass that grows 2-4 feet tall. When it’s fully grown, it makes seeds. Millions of those seeds are ground up to get into the middle part of the seed, then sifted to make a fine powder.<sup>2</sup>

Wheat is grown in all fifty states, but most of our wheat is grown right in the middle of the country, in an area called the Great Plains, and from there it is shipped all around the world.<sup>3,4</sup>

So that flour, after starting as seeds of a wheat plant, was then processed and packaged, delivered to a store shelf and eventually landed in your kitchen. It’s now ready for you to mix it with just the right amounts of water, yeast, and salt, to make a perfect stretchy pizza dough.

## The Sauce

Next is the tomato sauce. Tomato sauce, of course, is made with tomatoes. And whether you get your sauce in a jar or make it yourself, it’s essential for any pizza. But where do these tomatoes come from?

Tomatoes, and many of our other fruits and vegetables, are often grown in other countries. More than half of the tomatoes in our grocery stores are actually grown outside the United States.<sup>5</sup>

And it's not just tomatoes. If you've had a banana, lime, mango, pineapple, or avocado, it probably came from another country too.

Even if they are not grown in another country, your tomatoes could still be traveling a long way to get to your grocery store. A lot of tomatoes are grown in California, and if you live in New York, that's almost a 3,000-mile journey. If you were to carry that tomato with you as you walked from California to New York City, it would take you 40 days. (And you'd probably eat the tomato as a snack before you even got there).

Because that's such a long trip, fresh tomatoes are picked when they're still green- before they become red and ripe.<sup>6</sup> That way, they can ripen on the way and arrive in your store when they're ready to eat.

But if the tomatoes are going to a factory to be processed and packed in a can or jar as tomato sauce, farmers wait a little longer and pick the tomatoes when they're ripe. This is how they get the best taste for that perfect tomato sauce to spread on your pizza.

## The Cheese

Cheese is made from milk, which can come from cows, sheep, or goats.<sup>7</sup> Each of those different milks make cheeses that have different flavors or textures.

Basically, cheese is made by heating milk to kill bacteria (pasteurization), and then adding a starter culture and enzymes to cause a chemical reaction that makes the milk separate into solids (curds) and liquids (whey). The solids are then pressed together to make cheese.<sup>8</sup>

There are hundreds of different kinds of cheese, but you'd probably want something like stretchy mozzarella on your pizza. By the way, mozzarella isn't always made with cow's milk; in Italy it's often made from buffalo milk, which many experts claim makes it taste much better.<sup>9</sup>

Just like flour and tomatoes, the cheese for your pizza usually has to travel a long way to get to your supermarket. It's the very same journey for most of the foods we eat – from the farm to a processing facility, then to a truck or other means of transportation.

## The Impact of all that Transportation

It's truly amazing that at any time of year we can go into the grocery store and find everything on our list, whether it's watermelon in winter, goat cheese from France, or even pre-made frozen pizza. But being able to get food from distant places means that it has to be transported.<sup>10</sup>

This is a problem, because it takes energy that burns a lot of fossil fuels in order to transport food over those long distances.<sup>11</sup> And as we've mentioned in previous podcasts, fossil fuels, when they build up in the atmosphere, cause the climate to change and the planet to warm- and now we know that this is having a harmful effect on plants, animals and people.

## What You Can Do

There are some easy ways to help solve this problem:

You can buy foods that are grown locally.. Eating foods that are in season and grown or made near to where you live makes you a “locavore”.<sup>12</sup>

You can shop at a farmers’ market in the summer, where local farmers come to sell their produce.

You can also take part in other programs, like community supported agriculture, or CSA’s, where you pay to get a box of local, freshly picked vegetables every week during the growing season.<sup>13</sup>

Or you can join a community garden or start your own garden to grow some of your own food. Tomatoes, peppers, cucumbers, eggplant, squash and strawberries are all easy to grow in the summer, with a little water, sunlight, and patience. And vegetables that you’ve grown yourself taste better than anything from a store!

## Conclusion

In the end, it’s a lot of work to make one slice of pizza, and the same goes for all the other foods we eat. And we can be thankful for all the farmers, drivers, and grocery store workers who keep food in stock and ready for us to enjoy. We are lucky to live in a time and place where food is plentiful.

## Links for kids

[Wheat](#)

[How do plants make fruits and vegetables](#)

[Milk](#)

[Cheese](#)

## Sources

1. “[Wheat Facts for Kids](#),” by Tobin Declan. Published by Easy Science for Kids, May 2020.
2. “[Flour](#),” Published by How Products are Made.
3. “[Wheat Production Map](#),” Published by the National Association of Wheat Growers.
4. “[Grain: World Markets and Trade](#),” Published by the United States Department of Agriculture, May 2020.
5. “[Most of America’s Fruit Is Now Imported. Is That a Bad Thing?](#)” by David Karp. Published in the New York Times, March 13, 2018.
6. “[Facts About Tomatoes](#),” Published by the California Tomato Growers Association.
7. “[Does All Milk Come From Cows?](#)” Published by Wonderopolis.
8. “[How Is Cheese Made?](#)” Published by US Dairy.

9. "[Mozzarella](#)," Published by Alimentarium.
10. "[How Far Does Your Food Travel to Get to Your Plate?](#)" Published by the Center for Urban Education about Sustainable Agriculture.
11. "[Environmental Cost of Shipping Groceries Around the World](#)," by Elisabeth Rosenthal. Published in the New York Times, April 26, 2008.
12. "[10 Steps to Becoming a Locavore](#)," by Jennifer Maiser. Published by PBS NOW.
13. "[Community Supported Agriculture](#)," Published by Local Harvest

### Other sources

"[A Map of Where Your Food Originated May Surprise You](#)," by Jeremy Cherfas. Published by NPR, June 13, 2016.