

Grow it Here, Eat it Here

With 80 percent of the world's population living in cities by the year 2050, we need to consider indoor farming.

What do you think of when you hear the word *farm*? You probably think _____ a large, open land with lots of different crops growing and animals grazing, _____? Well, urban agriculturalist Caleb Harper is working to change how we think _____ farms.

Over the past few years, Caleb has been researching different forms _____ vertical farming. He has been working to bring farms into the city. His _____ focus is on two types of vertical farming: *aeroponics* and *hydroponics*. _____ aeroponics, a nutrient-filled mist is sprayed on a plant's roots to help them _____ without soil. With hydroponics, a plant is grown in nutrient-rich _____.

Caleb uses simple computer technologies to monitor his crops. _____ technology allows him to control climate and provide consistent light, _____, temperature and water. The result is better plant growth and flavor. _____ consistency also allows his crops to produce food four to five times faster _____ those of a traditional outdoor _____.

Caleb's work is important. Right now, we are facing a global food _____. The world's population is at 7 billion. In 30 years, it will be nearly 9 billion. _____ will need to produce 70 percent more food to feed these additional people, _____ there isn't enough _____.

Even if there were, traditional farming can be harmful to land. _____ soil loses nutrients. Farmers use chemicals to treat their crops. These _____ get into the ground and run off into bodies of water. The polluted water _____ threatens the ecosystem and the health of those living _____.

Vertical farming systems can help solve these problems. First, farms _____ urban areas will allow people to harvest fresh produce year-round. There is _____ need to worry about threats such as droughts or insects, which could ruin a _____. And indoor farms are sustainable. They use less water than a traditional _____, and with aeroponics, 97 percent of fresh water is reused. Vertical farms use _____ energy because they don't depend on large farming equipment and _____ transportation systems to carry the food from farm to city. And all of the crops _____ an indoor farm are grown without pesticides, so they are fresh, healthy _____ organic.

So, the next time you hear the word *farm*, don't just think of that _____, open land with crops and animals. Think inside the city--it's the future of _____.

Answers

What do you think of when you hear the word *farm*? You probably think of a large, open land with lots of different crops growing and animals grazing, right? Well, urban agriculturalist Caleb Harper is working to change how we think about farms.

Over the past few years, Caleb has been researching different forms of vertical farming. He has been working to bring farms into the city. His main focus is on two types of vertical farming: *aeroponics* and *hydroponics*. With aeroponics, a nutrient-filled mist is sprayed on a plant's roots to help them grow without soil. With hydroponics, a plant is grown in nutrient-rich water.

Caleb uses simple computer technologies to monitor his crops. This technology allows him to control climate and provide consistent light, food, temperature and water. The result is better plant growth and flavor. This consistency also allows his crops to produce food four to five times faster than those of a traditional outdoor farmer.

Caleb's work is important. Right now, we are facing a global food crisis. The world's population is at 7 billion. In 30 years, it will be nearly 9 billion. We will need to produce 70 percent more food to feed these additional people, but there isn't enough farmland.

Even if there were, traditional farming can be harmful to land. Overused soil loses nutrients. Farmers use chemicals to treat their crops. These chemicals get into the ground and run off into bodies of water. The polluted water supply threatens the ecosystem and the health of those living nearby.

Vertical farming systems can help solve these problems. First, farms in urban areas will allow people to harvest fresh produce year-round. There is no need to worry about threats such as droughts or insects, which could ruin a crop. And indoor farms are sustainable. They use less water than a traditional farm, and with aeroponics, 97 percent of fresh water is reused. Vertical farms use less energy because they don't depend on large farming equipment and long transportation systems to carry the food from farm to city. And all of the crops in an indoor farm are grown without pesticides, so they are fresh, healthy and organic.

So, the next time you hear the word *farm*, don't just think of that large, open land with crops and animals. Think inside the city--it's the future of farming.
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