

Farms Made of Dust and Selling Bird Poop: Exploring Why People Move
by Jack Bueno



This is a family that migrated from Texas to California in the 1930's. A family moving with all their possessions packed in their car was a common sight during this time. What do you think caused so many people to move?

Have you ever moved to a new home? If not, maybe you have a friend who has. People have been moving for all of human history. When people move to a new home, we call it migration. There are many reasons why people decide to move. Sometimes it is to be closer to family. And other times people decide to move because they can get a better job. Regardless of the reason, people often migrate because there is more of something somewhere else. When there is more of something, we say there is more opportunity. A place with better jobs has more opportunity. Opportunity is the reason why people decide that a new place is better.

Scarcity and Musical Chairs

But what about when a place has less of something? When a place does not have a lot of something, we say that there is scarcity. When there are not enough jobs, there is a scarcity of

jobs. Think about playing the game of musical chairs with your friends. There are not enough chairs for everyone, right? We could say there is a scarcity of chairs. Scarcity is a way to describe that there is not enough of something for everyone. Most of the time scarcity is not a good thing. When there is a scarcity of food, there is not enough food for everyone to eat.



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Dust Bowl Migration

A hundred years ago, many families in the United States had to move to new homes because there was not enough food where they lived. The soil in which they grew their crops became dry and started to blow away. Large clouds of dust roamed the prairies of the Midwest. The Midwest is an area in the center of the United States. We call this time the Dust Bowl.

Farmers could not grow food anymore because the soil was bad. The markets sold out of all their extra food. Soon there was very little food left. There was a scarcity of food.



The environment of Peru's islands is special because the cold water from the arctic keeps the guano on the rocky shores. This is what allows for people to use it for fertilizer. The people who lived in the Midwest at this time had a decision to make. They wanted to stay in their homes, but they knew they would be hungry if they did. They decided to leave their homes so that they could find a place where there was no scarcity of food. Many families made this decision in the 1930s. There was a migration of people from the Midwest to the West. The reason for the migration was because there was a scarcity of food in the Midwest. There were opportunities for jobs and food in the West. The opportunity for a

job and for food are just two kinds of opportunity. And just like jobs and food, opportunity can be scarce. The amount of opportunity is an important part of what someone uses to make a decision to move somewhere new.

Peruvian Guano Spurs Migration

Another example of migration happened on the islands near Peru in South America. In the 1850s, European sailors saw a group of Peruvian Native Americans placing bird poop in soil. Bird poop, called guano, made the soil better for growing crops. Europeans saw the Peruvians fertilizing the soil with guano. Fertilizing the soil helps crops to grow better. The new technology meant that more crops could be grown.

Farmers in Europe and the United States began using guano to fertilize their soil. Guano became very important to them in growing food. People from all over the world knew that guano was important. Some people saw an opportunity to have a guano island of their own. These people wanted to sell the guano to the farmers in the United States.



The bird that produces guano is called a cormorant. Their waste was used as fertilizer before artificial fertilizers were invented. The environment of Peru's islands is special because the cold water from the arctic keeps the guano on the rocky shores. This is what allows for people to use it for fertilizer.

Guano Islands Act of 1856 Spurs Migration

The United States' government also wanted their farmers to have guano. In 1856 the United States congress passed the Guano Islands Act. This law allowed United States citizens to move to any island that didn't have people but had guano. Many people from the United States moved to the Peruvian Islands because they saw an opportunity. The opportunity to sell guano was a reason for the decision for people in the United States to migrate south.

A Loss of Opportunity

After many people moved to the Peruvian Islands, the amount of guano began to go down. When people moved to the islands, they ate the bird that pooped guano. The more families that migrated to the islands, the less birds there would be. With less and less birds every year, there was less guano to sell to farmers. There was a guano scarcity after many of the birds were eaten. There was no longer an opportunity with guano. Migration did not keep happening because there was no longer opportunity.

Scarcity and Opportunity Spurs Decisions

Moving to a new home can be scary or it can be fun. When a person sees an opportunity in another place, they have to make a decision. There is less opportunity when something is scarce. If the new place has less scarcity, there is more opportunity. Migration happens when a person decides to go somewhere new because there is more opportunity. During the Dust Bowl, families made a decision to leave a place that had a food scarcity. When guano was discovered, people made a decision to move to an island of their own and sell guano to farmers. Migration can happen when there is not enough of something in a place. Migration can also happen when there is a lot of something in a new place. The decision to migrate is always about seeking better opportunities for you and your family.

Did you know there is a difference between soil and dirt?

The difference between soil and dirt is important to every farmer around the world. But to many of us who are not farmers, dirt and soil may sound like the same thing. When farmers grow plants for food, we call the plants crops. Think about the vegetables and fruits you eat for lunch. Corn, apples, and carrots are all crops! Since crops are plants that we eat, and we know plants grow in soil, we also know that soil is important to crops. When dirt has all the right ingredients to grow crops, we call the dirt, soil. Soil means that the dirt can grow healthy crops.

But how can soil grow healthy crops? Plants, like us, need special ingredients to live. Our ingredients to live are air, water, and food. A plant's ingredients are air, water, and soil. Instead of eating food, plants use their roots to get their ingredients from the soil. When soil has a lot of ingredients the plant needs, we say the soil is *rich*. Farmers want their soil to be rich in ingredients that the plant needs to grow. Because of this, farmers began to find ways to add ingredients to the dirt in order to make soil for crops. One of the ways to add ingredients to the soil was by adding bird poop, or guano. Adding ingredients to dirt to make it soil is called fertilizing. The ingredient that is added to the dirt is called a fertilizer. Since guano was added to the soil, guano is a fertilizer.

What happens when fertilizers are not used? Over time, crops take away the ingredients in the soil. This is what caused the Dust Bowl. After many years of farming the land with crops, the soil turned to dirt because all the ingredients were taken out of the soil. The farmers did not add enough fertilizer. Crops no longer were able to grow because there was no soil. Many farmers had to make the decision to move a place with soil and not dirt.

