

$\text{CO}_2$  +



1  
00:00:04,000 --> 00:00:08,000  
Carbon dioxide is a kind of plant food.

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00:00:08,000 --> 00:00:12,000  
Plants break down carbon dioxide as they make energy through photosynthesis, releasing

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00:00:12,000 --> 00:00:16,000  
oxygen in the process. That's why as humans have increased

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00:00:16,000 --> 00:00:20,000  
the amount of carbon dioxide in the atmosphere, some places have seen increased plant growth.

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00:00:20,000 --> 00:00:24,000  
But that won't continue forever.

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00:00:24,000 --> 00:00:28,000  
Carbon dioxide is a greenhouse gas,

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00:00:28,000 --> 00:00:32,000  
responsible for warming our planet. Right now, the land and the ocean

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00:00:32,000 --> 00:00:36,000  
about 55 percent of the carbon dioxide released by humans.

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00:00:36,000 --> 00:00:40,000  
The rest stays in the atmosphere, acting like a blanket around Earth.

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00:00:40,000 --> 00:00:44,000  
As the climate gets warmer, plants are absorbing less carbon dioxide.

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00:00:44,000 --> 00:00:48,000  
In some places, like the Arctic region,

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00:00:48,000 --> 00:00:52,000  
water is becoming scarcer, acting as a limiting factor

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00:00:52,000 --> 00:00:56,000

that inhibits plant growth. In other places, like the tropical latitudes,

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00:00:56,000 --> 00:01:00,000

low soil nutrients limit the growth of plants, even when there's plenty of carbon dioxide.

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00:01:00,000 --> 00:01:04,000

But it's not just external factors

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00:01:04,000 --> 00:01:08,000

that could affect how plants absorb carbon dioxide –

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00:01:08,000 --> 00:01:12,000

as the concentration in the atmosphere increases, plants seem to use less of it.

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00:01:12,000 --> 00:01:16,000

From 1982 to 2015, we've already seen

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00:01:16,000 --> 00:01:20,000

a decrease in how efficient plants are at absorbing carbon dioxide.

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00:01:20,000 --> 00:01:24,000

NASA researchers are using data from a variety of different satellites

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00:01:24,000 --> 00:01:28,000

to calculate how efficient plants are at absorbing carbon dioxide.

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00:01:28,000 --> 00:01:32,000

They're working to understand how more carbon emissions will warm the planet

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00:01:32,000 --> 00:01:36,000

as plants use less of it – important for understanding