



	Largest Exporters	Value US Dollars		Largest Importers	Value US Dollars
1					
2					
3					
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10					

Global Warming Is Helping to Wipe Out Coffee in the Wild

By Somini Sengupta, Jan. 16, 2019

Aaron Davis, a British botanist, has spent 30 years trekking across forests and farms to chronicle the fate of one plant: coffee.

He has recorded how a warming planet is making it harder to grow coffee in traditional coffee-producing regions, including Ethiopia, the birthplace of the world's most popular bean, arabica. He has mapped where farmers can grow coffee next: basically upcountry, where it's cooler. He has gone searching for rare varieties in the wild.

Now, in what is perhaps his most disheartening research, Dr. Davis has found that wild coffee, the dozens of varieties that once occurred under forest canopies on at least three continents, is at risk of vanishing forever. Among the world's 124 coffee species, he and a team of scientists have concluded, 60 percent are at risk of extinction in the wild. Climate change and deforestation are to blame.

It matters because those wild varieties could be crucial for coffee's survival in the era of global warming. In those plants could lie the genes that scientists need to develop new varieties that can grow on a hotter, drier planet.

"There are a broad range of traits, which have good potential for addressing specific issues in the future, whether its drought tolerance or disease resistance," Dr. Davis said by phone from the Royal Botanic Gardens in the London suburb of Kew, where he is a senior researcher. "As we lose those coffees, our options diminish."

Of the 124 known wild species, most are not cultivated or consumed. Two exceptions are arabica, which has been farmed for hundreds of years in East Africa, and robusta, which has gone from the wild to one of the world's most important commodities in the past 100 years. Coffee farmers already face mounting pressure from drought, disease and the vagaries of commodities prices. Addressing those risks requires tapping into the genetic riches of wild variety.

Wild coffees can be preserved in seed banks or in nationally protected forests. Most are not. Dr. Davis' inventory found that nearly half of all wild coffee species are not held in seed banks, and a third do not grow in national forests.

A 2018 report by the Crop Trust, which runs a global seed bank, also warned of the need to preserve the genetic diversity of coffee, including its wild varieties. Only a handful of gene banks hold coffee trees, the report found, and many of them are hampered by either aging specimens or a lack of adequate funding. If greenhouse gas emissions continue to rise at their current pace, changing climate conditions could move wild arabica from the conservation union's "near threatened" category to "extinct" by the end of the century.

For Dr. Davis, the loss of wild varieties is important not just for plant breeders, farmers and coffee drinkers. The loss of a species also means less food and less shelter in its ecosystem. The result, in his view, is a diminished Earth. "Our planet becomes less diverse, less interesting," he said.

His most recent expedition took him to Sierra Leone in December. He and his colleagues went searching for what they had feared was a lost coffee species, the slow-growing stenophylla, which hadn't been seen on a plantation in more than 60 years.

On that land, the team found one plant — insufficient to propagate. So they kept walking. Across the border in Liberia, after a six-hour trek, they arrived at a hillside covered with stenophylla. It is now being tested in Sierra Leone.

Questions For Analysis

1) Why are wild coffees important to Aaron Davis?

2) Germany and Switzerland grow no (zero) coffee beans. What reason(s) can there be for each being a top 10 exporter of coffee?