


COFFEE PRODUCTION IN THE FACE OF CLIMATE CHANGE: HONDURAS

KEY PRODUCTION AREAS IN HONDURAS

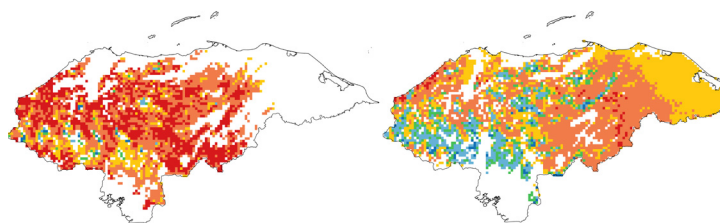
Arabica  Key Departments  Departments with minor production



Most Arabica coffee is grown in the Sierra Madre mountains, crossing the country from the south-east to the west. About 30% of coffee is grown at altitudes below 900 m. Robusta is not produced in Honduras.

Arabica

Robusta



 - Suitability +

Changes in suitability between today and 2050 ⁽⁵⁾

OBSERVED AND PREDICTED EFFECTS OF CLIMATE CHANGE IN COFFEE PRODUCING AREAS ⁽⁴⁾



Rising Temperatures

- The annual mean temperature is projected to increase by 1.9°C by 2050. This increase is expected to be more pronounced in the west.



Changing Rainfall

- Predictions for changes in rainfall vary widely between models. Changes in annual rainfall are expected to be small, but more pronounced in western Honduras.



Extreme Weather Events

- The region is prone to droughts, excessive rains and severe flooding. Droughts are expected to become more likely and more severe.

LIKELY IMPACTS OF CLIMATE CHANGE ON COFFEE PRODUCTION

Predicted changes in coffee producing areas:

- Land with basic suitability will be 200 m higher than today.⁽⁴⁾ Coffee farmers in areas below 1,000 m will likely have to transition to other crops.
- 45% of land currently suitable for Arabica coffee requires comprehensive adaptation measures to remain suitable.⁽⁴⁾ This includes more costly investment such as replacing coffee trees with new varieties, installation of irrigation and water harvesting structures, and use of polymers for water retention.
- There is limited potential to shift coffee to higher areas in western Honduras. Forest areas above 1,800 m are protected.

THE IMPORTANCE OF COFFEE IN THE HONDURAS ECONOMY^(1,2,3,4)

Coffee production and export in 2017/2018

- Arabica: 501,000 tons
- About 95% are exported without processing
- Over 30% of exports are specialty coffees

Area under coffee production

Arabica
342,000 ha

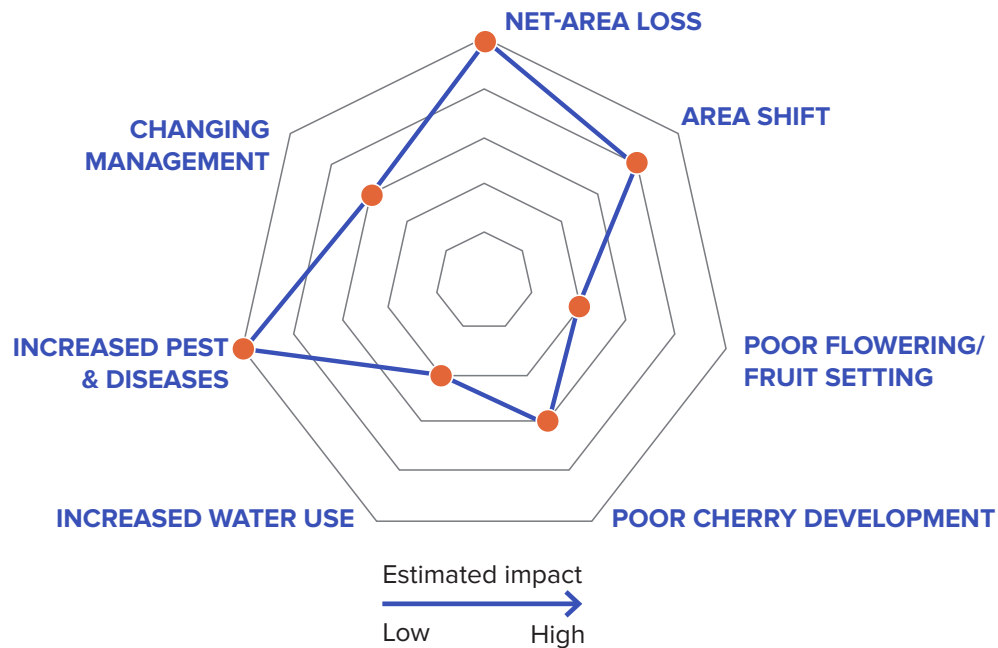
Farms

- For >100,000 farm households coffee is the primary income
- 70% of producers have farms below 2ha and 25% between 2-7ha; together they produce 70% of coffee

Importance in the national economy

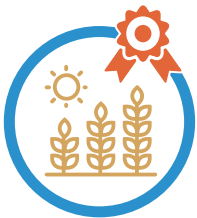
- Coffee generates:
- 20% of foreign exchange
 - 4% of overall and 30% of agricultural gross domestic product

LIKELY IMPACTS OF CLIMATE CHANGE ON COFFEE PRODUCTION



- More frequent and severe droughts will reduce production unless farmers invest in water management.⁽⁴⁾
 - The climatic changes will likely cause higher incidences of pest and diseases:⁽⁴⁾
 - The coffee leaf rust crisis (2012-2014) was likely linked to rising minimum temperatures.
- Reproduction rates of the coffee berry borer benefit from higher temperatures. Infestations are expected to be more severe and to occur at higher altitudes.
- Other fungal diseases (e.g. Leaf Spot Disease) are linked to moist conditions (higher rainfall, shade trees). Farmers will have to adjust canopy cover, balancing the need for temperature regulation while avoiding excessive moisture.

PRODUCTION STANDARDS AND PRACTICES



CERTIFIED PRODUCTION

- About 20% of coffee is certified with Rainforest Alliance/UTZ, Organic and Fairtrade International.⁽⁴⁾
- A smaller share is certified by other standards.



FARM PRACTICES

- Smallholder coffee farmers grow food crops for subsistence.
- Commonly coffee is grown under shade. About 20% is grown under full sun.⁽⁴⁾
- The majority of farmers sell coffee washed but without drying.



FARM ECONOMY

- The average yield is 1.1 tons/ha.⁽³⁾
- Smallholder farms rely largely on family labor.
- Farmers receive about 75% of export price.⁽³⁾

REFERENCES

1. ICO, 2018: Trade Statistics Tables. International Coffee Organization. http://www.ico.org/trade_statistics.asp. Accessed 20.07.2018.
2. USDA, 2018: Honduras coffee annual. USDA Foreign Agricultural Service. Retrieved from: [https://gain.fas.usda.gov/Recent GAIN Publications/Coffee Annual_Tegucigalpa_Honduras_5-24-2017.pdf](https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Coffee%20Annual_Tegucigalpa_Honduras_5-24-2017.pdf)
3. GCP, 2018: Honduras: A quick Scan on Improving the Economic Viability of Coffee Farming. Presentation prepared by Technoserve for the Global Coffee Platform. Retrieved from: http://www.globalcoffeeplatform.org/assets/files/Resources/Honduras-Deliverable_vSent.pdf
4. Bunn C, Lundy M, Läderach P, Girvetz E, Castro F, 2018: Climate-smart coffee in Honduras. International Center for Tropical Agriculture (CIAT), United States Agency for International Development (USAID). Retrieved from: <http://hdl.handle.net/10568/97530>
5. Bunn C, Läderach P, Ovalle-Rivera O, Kirschke D, 2015: A bitter cup: climate change profile of global production of Arabica and Robusta coffee. Climatic Change (2015) 129:89–101

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