Coffee rust, a disease caused by the fungus Hemileia vastatrix, has seriously affected coffee production in Central America this year, where many countries have declared national emergencies in relation to the outbreak.

The disease leads to severe defoliation in coffee plants, and can be detected by checking for orange spots on the reverse side of the leaves.

"The leaf fills with these spots and falls. The fruit does not ripen, it does not develop and it falls too," says Armando Garcia, executive secretary of the Regional Cooperative Program for the Technological Development and Modernization of Coffee (PROMECAFE).

He highlights the problem is nothing new. The industry has known about coffee rust since 1976 and has been working to confront the issue since then.

Its appearance depends on four key factors - a susceptible host, the nature of the pathogen, climatic variation and inadequate orchard management.

"In recent years it has been present but it wasn't a problem, managed as something normal within the coffee industry, but for some reason it went out of control last year and that has caused bigger problems for us," says Garcia, whose group includes members from El Salvador, Costa Rica, Panama, the Dominican Republic, Jamaica, Honduras and Guatemala

"Growers know what they have to do as the problem isn't new. Coffee associations from every country have training programs and technical assistance programs so that farmers can have good crop practices."

According to to data from PROMECAFE and the Inter-American Institute for Agricultural Cooperation (IICA), out of the 593,037 hectares dedicated to the crop in member countries and Nicaragua, 55% has been affected by rust. It is estimated that the disease has caused harvest losses of around 3.5 million (60kg) sacks and US$499 million in lost foreign exchange.

It is important to note that coffee accounts for a significant portion of GDP in countries like Honduras and Guatemala, at rates of aroudn 30% and 15% respectively.

Experts attribute the current outbreak to many factors, associated with poor agricultural practices combined with climatic events and low coffee prices.

"Many growers have not invested in the management of shade, fertilization, monitoring, fumigation, and have also not renewed old plantations, and some contain varieties that are

susceptible to rust," says a PROMECAFE and IICA document, which mentions that climate variability and a rise in temperature have led to "structural deficiencies".

Facing the crisis - developing national plans

With the support of IICA, PROMECAFE built a regional plan which was approved in March this year by the coffee institutes of member countries and their agriculture ministries.

The plan contains six elements: integrated management of the disease over the medium term; developing the capacity of institutions to manage and fight the outbreak; breeding to develop and improve resistant coffee varieties with good cupping quality; large scale rehabilitation through the renewal of old and unproductive coffee plans; a regional strategy that helps to promote action plans against the disease; and support for vulnerable communities through food and nutrition security measures, generating alternative employment opportunities and providing social compensation.

In the short term, fungicide application programs will be the main tool to eliminate the current outbreak. However, IICA emphasizes that spraying alone is not a viable solution to overcome the crisis over the medium to lon term.

"To do that requires taking charge, in a combined way, of coffee plant renewal, better agronomic management, better fertilization and monitoring practices, and the timely application of fungicides.

"As a long term strategy, the coffee crop should be replaced in some zones (especially the lowest) by crops with the same or higher agronomic viability, with a higher resistance to climate change and that contribute to improving the lives of growers.

"To achieve that, an urgent strengthening of institutions is needed, and to inrease investments in research and development of capacity."

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