

One Health

One Health is a collaborative efforts of multiple disciplines working locally, nationally, and globally to attain optimal health for people, animals, plants and environment.

Plants are both directly and indirectly essential for human and animal health.



In December 2018, the United Nations General Assembly adopted the resolution A/RES/73/252 declaring 2020 as the International Year of Plant Health (IYPH).

The year is a once in a lifetime opportunity to raise global awareness on how protecting plant health can help end hunger, reduce poverty, protect the environment, and boost economic development.



INTERNATIONAL YEAR OF
PLANT HEALTH

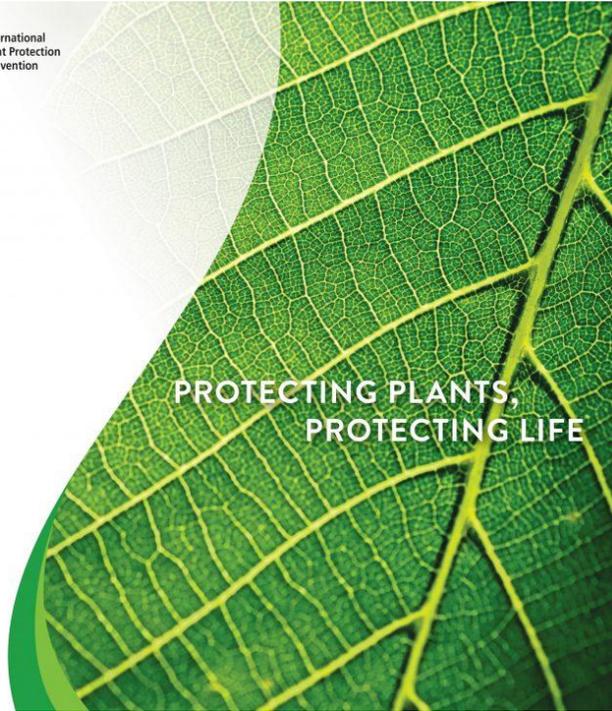
2020



INTERNATIONAL YEAR OF
PLANT HEALTH

2020

www.fao.org/plant-health-2020
IYPH@fao.org



PROTECTING PLANTS, PROTECTING LIFE

Plants provide the core basis for life on Earth and they are the most important pillar of human nutrition. Plants are the source of the oxygen we breathe, absorb carbon dioxide, and - directly or indirectly, via animals - make up 98 % of the food we eat

But healthy plants are not something that we can take for granted. Yet, they are under constant and increasing threat from pests and diseases.

Plant health
is **your** health.



The Sustainable Development Goals (SDGs) are a collection of 17 interlinked global goals (and 169 specific targets for those goals) designed to *achieve a better and more sustainable future for all*. They are included in a UN Resolution called **Agenda 2030** and are intended to be achieved by the year 2030



Goals directly dependent on plant health

10/17



Food Safety: plant products free from mycotoxins, pesticide residues and contaminants

Food Security: enough food at the right time to feed people; a measure of the availability of food and individuals' ability to access it

Plant diseases and human affairs

Natural landscape deeply modified: Tuscany,
cypress canker



Ceratocystis platani

Urban landscape deeply
modified: Tuscany, London
plane pandemic

Potato Late Blight



Host: potato

Symptoms: at leaf and tuber level

Which is the distribution of the symptoms?

Which is the color of the symptoms?

Which is the size of the symptoms?

The potato was introduced into Europe about 1750 and became an important food group among poor rural people.

In Ireland, it became the sole food for tenant farmers whose wheat crop paid their rent.

A series of wet, cool summers in the 1840's led to an epidemic of a disease called "late blight" that completely destroyed the potato crops year after year.



Thousands of Irish starved to death; 1 1/2 million emigrated to escape starvation. Many Americans of Irish descent can trace their family histories to that period.

<https://www.apsnet.org/members/engagement/opro/Documents/storybk.pdf>

Coffee rust



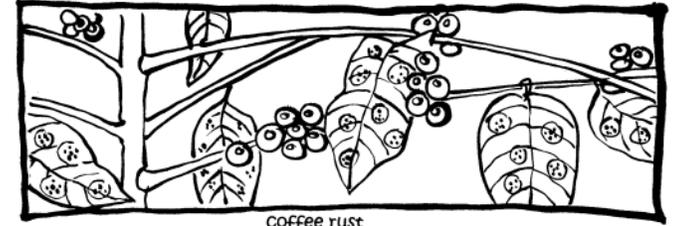
Host: coffee

Symptoms: at leaf level

Which is the distribution of the symptoms?

Which is the color of the symptoms?

Which is the size of the symptoms?



coffee rust

Coffee has been a popular beverage in Europe since the 1600's. In the 1800's, the fungal disease "coffee rust" devastated the British coffee plantations in Ceylon. Because of this, the British switched to growing and drinking tea.



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Pathometric scale = rating of disease symptoms

Incidence (or frequency) = the rate at which cases occur in a diseased population. It is the percentage of diseased samples (e.g., plants) in the population

Intensity = rating of a leaf spot disease

Xylella fastidiosa



Immune system

Unlike vertebrates that have an adaptive and an innate immune system, plants exclusively rely on their “innate immune system” that is active in all cells of the organism

