Hawa is a grower. She has already participated in liming tests on her seed potato crops. Today, she is on Abraham’s land, a grower friend who has been dealing, for several years, with a drop in yields of his own crops...

**WHY LIME MY SOIL?**

Hawa, my cocoa trees do not give many pods anymore! I fear for my yields!

Have you ever tested your soil?

No! Test my soil; I’ve never done that. What for?

Last year I had the same problem. Maybe your soil lacks material organic? Or is it too acidic for the plant to feed properly?

Why would my soil be acidic?

Acidification can be natural or caused by a lack of good tillage, a poor management of fertility...

...or by an excessive application of nitrogen fertilizers over several years...
... Or because the soil is left bare...

... or when the water does not permeate well into the soil and runs off...

... or when water permeates too quickly and too deeply into the ground deep in the ground...

... or when the water carries the soil with it.
HOW TO TEST MY SOIL?

To know if your soil is acidic, you use a strip of pH paper.

What does pH mean?

pH measures the level of soils’ acidity. We will be able to "read" the pH on the strip.

You take handfuls of soil from 0 to 10 cm maximum depth in several areas of the plot, where the soil is good, average, and bad.

You then remove the small stones and twigs.

Liming may be the solution. Agricultural lime helps to reduce acidity.

What is it this technology again? How it works?

I’m going to explain everything to you, we’ll start by testing your soil.
You place the samples separately in very clean containers. For example, the bottom part of water bottles. Do not use metal containers.

You take water from a river, a well, or a jar and pour it into a clean container. You must not take dirty, stagnant water or from the tap.

Acidification can be natural or caused by a lack of good tillage, a poor management of fertility...

The water must be neutral, i.e. have a pH close to 7. If it is the case, you can use it to test the soil. Otherwise, you need to change the water.

Pour the water into the containers, just enough to cover the samples. Stir well with a stick (not a metal object) and let it sit for one to two minutes.

Then you dip the strip in the soil solution for 5 to 10 seconds. You take out the strip, you shake it. You compare its color with the colored scale.
If the color of the strip goes from 0 to 7 (yellow, orange, red), your soil is acidic. The more red the color, the more acidic your soil is. If the color goes from 7 to 14, it is not acidic!

**WHAT TYPE OF LIMING?**

Recovery liming: pH between 3 and 4

If the soil is very acidic, you must do a recovery liming to raise the pH quickly.

In the first year, the advisor recommends applying 500 kg to 1000 kg (or 1/2 to 1 ton) of dolomite per hectare. Then, each subsequent year, you can add 300 to 500 kg for maintenance.
How do I choose the product?

You must choose dolomite: this agricultural lime fights against acidity and provides magnesium. For recovery liming, you must choose a fine powder of 2 to 3 mm.

Maintenance liming: pH between 5 and 6

If the soil is not too acidic or if it has already been limed in previous years, you must do a maintenance liming to maintain the pH.
Every three years, 300 kg of dolomite per hectare must be spread.

For maintenance liming, you should use dolomite in the form of a mixture of powder and granules. The fine elements dissolve quickly in the soil and the others will dissolve slowly over time.
HOW AND WHEN TO LIME MY SOIL?

Is dolomite a chemical fertilizer?

No, dolomite is an amendment made from limestone rock which is crushed at the factory. It's natural!

Its application is not difficult because it is not corrosive.

After, I will not have any more problem of acidity?

I hope not. You will need to monitor the acidity of your soil by measuring its pH every year.
Also, you need to be careful with your practices to keep your soil the least acidic possible: do not use too much nitrogen fertilizer, don’t let the soil bare, protect your soil from water and wind erosion.

When should I lime?

You should lime only if the soil is acidic, preferably in between crops.

You can apply lime by hand.
And remember! If you want to apply manure, you must apply the lime first and incorporate it well with a good tillage.

The soil should always be plowed after liming to incorporate the dolomite.
Several months later

Look! My trees are doing better! My production will be good this year!

At harvest

My pods are bigger and there are lots of them!
The effect of the dolomite has made fertilizer available to the plant. As a result of liming, Abraham’s income increased by 40% and his potato tubers are better preserved. Abraham and Hawa decide to spread the good news at the village square.

That's not all! Liming enhances the biological activity of soils, such as that of earthworms for example. Soils are better able to withstand drought.