Say NO to Soil Salinization

Content

Introduction

Soil salinization is the process that soil become salty and unsuitable for plant to grow. It lowers the productivity of land, which has a huge impact on agriculture.

In this booklet, you can follow the story of maize, learning the cause of formation and the influence of salt affected soil. Besides, you can also learn how to fight against the soil salinization.

Halt soil salinization,
boost soil productivity

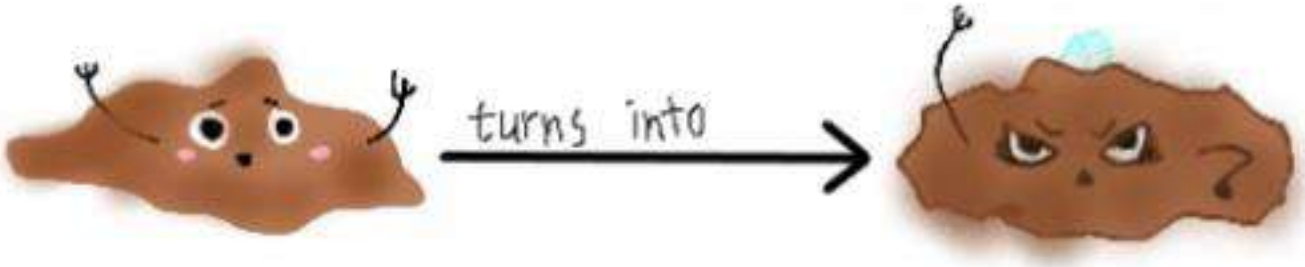
Happy life of maize

The crops Says:

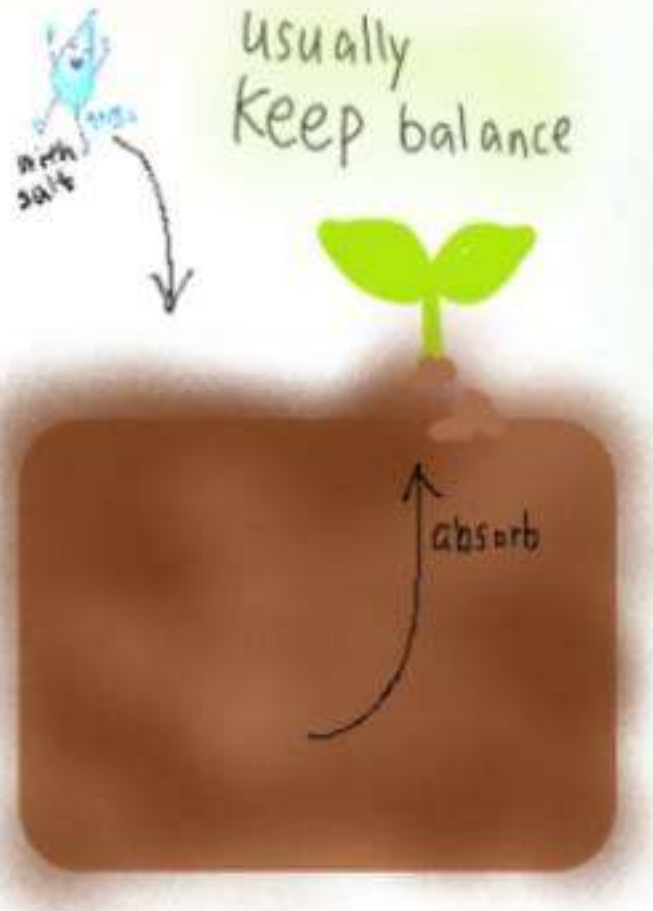
With abundant sunlight, clean water and the soil that contains some mineral salt, I live happily and have the capacity to output food.

Balance of water and salt

But something is going wrong. It is about soil, who isn't friendly anymore. Instead, soil becomes a bad guy with a salty crown!



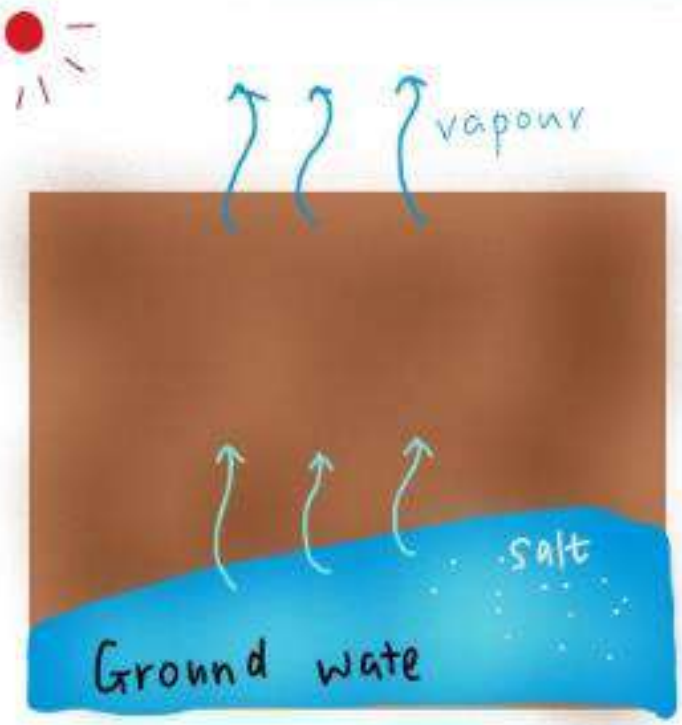
But Why? How our lovely friend turns into a bad guy. First, you should know the balance of water in soil.



Usually, soil is watered by water with a little salt, which benefits crops. Crops absorb the salt in soil to help its growth. In most circumstances, the salt input is equal to the output, leading to a good cycle. The salt in soil is relatively invariable, which is the balance of water and salt.

Cause of Soil salinization

But sometimes, the balance will break. Nature and human activities can both cause soil salinization. In a word, the water is easy to remove, but the salt not, leading to salty soil.



Nature

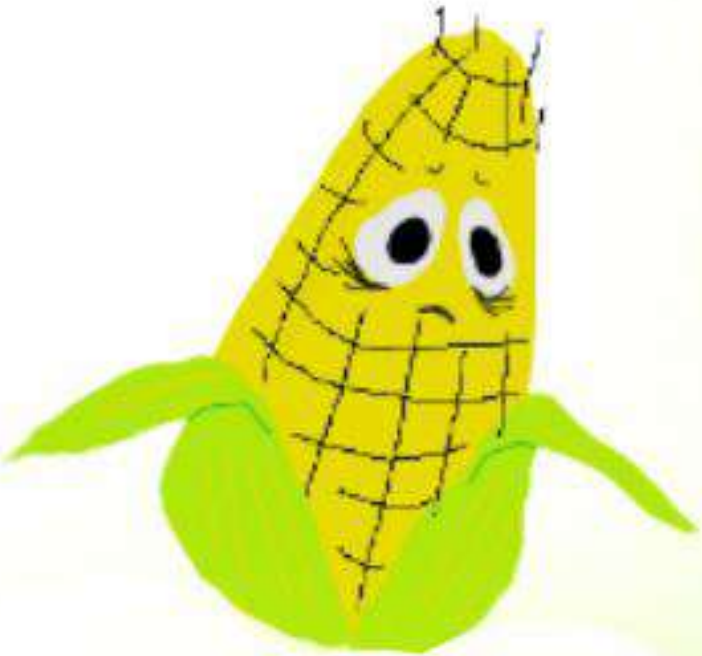
For example, the ground water rise from underground, bringing salt upward. The water evaporate and leave the salt in soil. The balance breaks.

Human activities

To improve the yield of field, human use fertilizer. But the overuse of the fertilizer sharply increase the salt in soil. That fasten the process of soil salinization. What's more, if dirty water that contain high salt used to irrigate, or the frequency to irrigate is not proper, after water evaporation, the soil will also be salt affected.

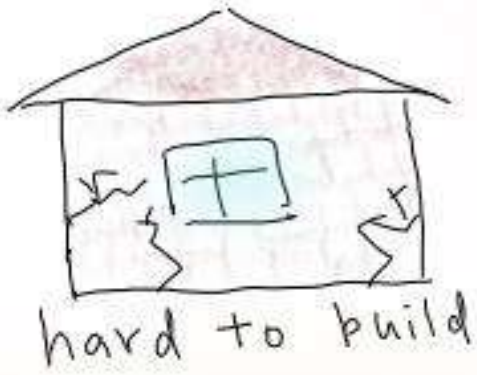
Influnce

I'm a real bad guy. All you have to bow to my salty crown!



If planted on the salt affected soil, the crops will grow unhealthily. It is common that the crops will be sick, the leaves will droop and the green color fade. Furthermore, salty soil is unsuitable for crops to take roots. Thus, if the soil salinization aggravate, the plants will die **from the soil.**

Because of the salt affected soil, I'm sick now. I can't absorb water well, or stand straightly. I' m too weak to grow, not to mention product seeds. Emergently, I need aid to defeat the bad soil.



Besides, the salt affected soil is not suitable to build, which also waste the land.

The land can't grow good crops is meaningless to our farmers. It impacts on our income. What's worse, it slows down the ecomomy indirectly.

Soil salinization will definitely affect the soil productivity and reduce the output of crops. When soil salinization becomes worse, the crops may produce nothing, which affects food supply and may intensify starvation.

methods to solve the problem

chemical way
Chemistry can be used to relive soil salinization. It changes the salty situation of soil.

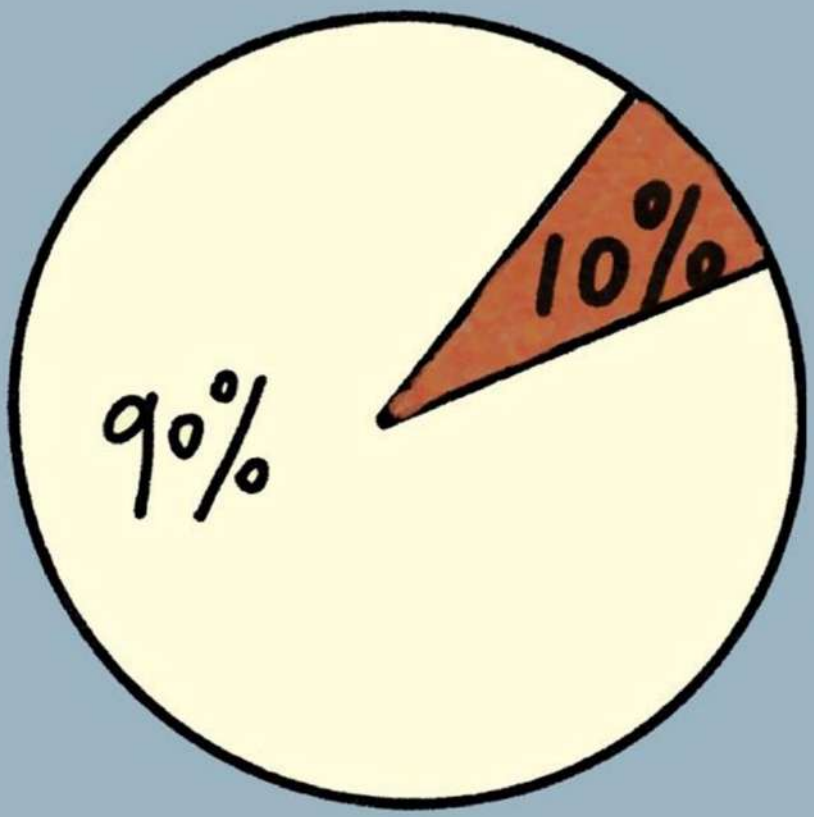
Although this method is efficient, it is not a long-term method as its effect will weaken soon.

biological way
Some plants is salt-tolerant, can be used to plant on the salt affected soil. On the one hand, plants can cover the soil and reduce the water evaporation. On the other hand, the plants can also take in salt. Additionally, it is a low-cost method and brings economic benefits.

synthetical way
Soil salinization is a complex process. Hence, using the synthetical method may be the most appropriate way, which means we can not use single method, but use the combi-nation of different methods. Anyway, we should use the methods depending on local soil situ-ation.

The world map of salt-affected soils

Red: In Saline
Gray: No data
Yellow: Normal



Saline soils are distributed in all continents of the world, accounting for about 10% of the earth`s total land area, up to 920 million hm^2, mainly distributed in early dry and semi-arid desert regions.

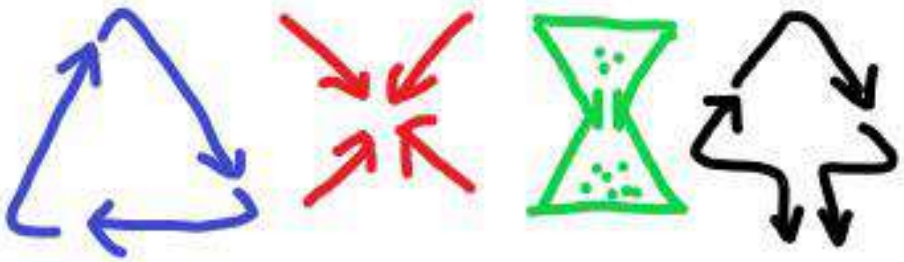
Take Action

That's all about the soil salinization. We have already learnt the influence of soil salinization. It is of great significant to take action to fight soil threats. As a smaller member of the Earth, what can we do to take action to fight with soil salinization.

Understand soil salinization.
By learning the knowledge of soil salinization, we can raise our interest and awareness to protect the land we live on. Otherwise, if we care about the soil, we can devote ourselves into the career of science to explore the way solving the problem.

Avoid waste food and water

Reduce the use of fertilizer



resource recycle

Reference

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