

a basic introduction to

agricultural techniques

healthy soil challenge : GROW

photo by tomas hertogh



“CONVENTIONAL” AGRICULTURE

The industrialization of agriculture caused the system we have today. There is very little variety in crops and lots of pesticide use in an effort to produce the largest amount food possible for the lowest price.

photo by gabriel jimenez



REGENERATIVE AGRICULTURE

Regenerative agriculture combines crop and livestock production to create a circular ecosystem: The plants feed the animals, and the animal waste feeds the plants. These methods ensure the soil stays healthy and resilient.



REGENERATIVE AGRICULTURE IS NOTHING NEW

MANY OF THE PRACTICES YOU WILL LEARN ABOUT NEXT ARE OFTEN SEEN AS "NEW" TO THE FARMING/GARDENING WORLD. BUT THEY ARE ACTUALLY VERY OLD. THEY HAVE BEEN TRADITIONALLY USED BY NATIVE AMERICAN PEOPLES. BUT THAT IS NOT TO SAY THAT ALL OF THESE TECHNIQUES WERE USED BY ALL NATIVE AMERICAN CULTURES. JUST LIKE SEPARATE COUNTRIES. INDIGENOUS CULTURES VARY WIDELY IN THEIR GARDENING PHILOSOPHIES AND TECHNIQUES.

<https://www.almanac.com/native-american-gardening-techniques>



LET'S LEARN ABOUT SOME
REGENERATIVE

FARMING PRACTICES!

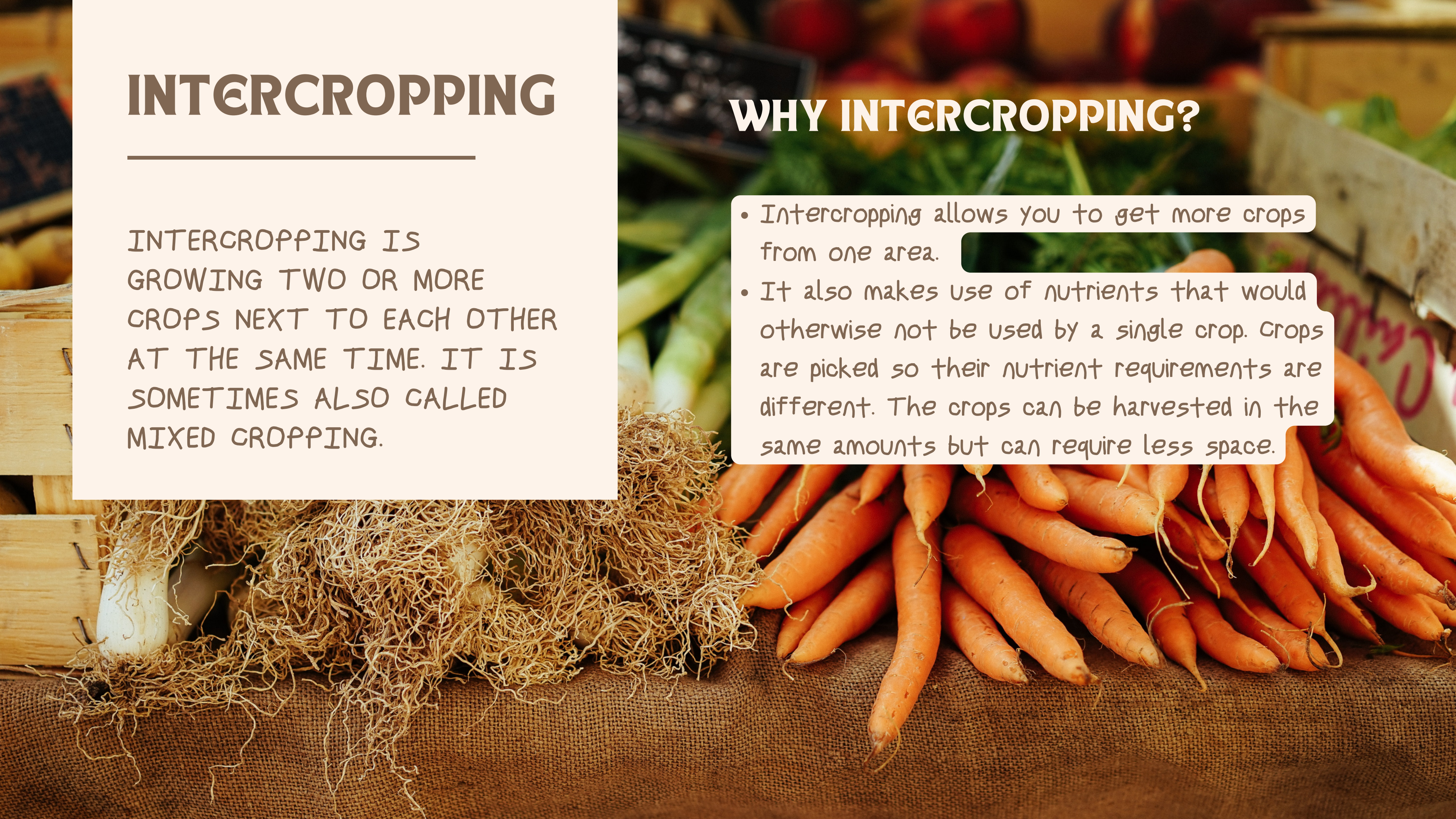
ON THE NEXT FEW SLIDES, YOU WILL
LEARN ABOUT FIVE INDIGENOUS FARMING
PRACTICES THAT HAVE HELPED SHAPE
SUSTAINABLE FARMING METHODS ALL
OVER THE WORLD.

INTERCROPPING

INTERCROPPING IS GROWING TWO OR MORE CROPS NEXT TO EACH OTHER AT THE SAME TIME. IT IS SOMETIMES ALSO CALLED MIXED CROPPING.

WHY INTERCROPPING?

- Intercropping allows you to get more crops from one area.
- It also makes use of nutrients that would otherwise not be used by a single crop. Crops are picked so their nutrient requirements are different. The crops can be harvested in the same amounts but can require less space.



AGROFORESTRY

THIS IS THE PRACTICE OF MIXING AGRICULTURE WITH FORESTRY BY GROWING TREES AND SHRUBS ON THE SAME LAND AS THE CROPS.

WHY AGROFORESTRY?

- Trees take carbon from the atmosphere and store it in the soil, and cycle nutrients that can feed other plants, animals, and fungi. This will keep the soil healthy, allowing it to store even more carbon!
- Some crops are sensitive to the wind, and trees protect them from the force of the it. Trees can also provide shelter from snow and rain.
- Trees bind the soil and help in preventing soil erosion.
- Trees and shrubs can be grown between farmlands and rivers or streams so that they can filter out waste from the rainwater.

CROP ROTATION

CROP ROTATION IS THE PRACTICE OF GROWING DIFFERENT CROPS ON THE SAME LAND SO EACH AREA DOES NOT HAVE THE SAME CROP ON IT IN CONSECUTIVE SEASONS.

WHY ROTATE CROPS?

- Different crops need different nutrients. If one crop is grown on the same land for many harvests, the soil may run low on a particular nutrient. This can be prevented by alternating which crop is planted on a given piece of land.
- It prevents the accumulation of toxins and bad chemicals that some plants produce.
- It allows the farmer to plant crops without applying chemical fertilizers.

WATER HARVESTING

THIS MEANS USING RAINFALL, INVOLVING A VARIETY OF METHODS TO COLLECT AS MUCH WATER AS POSSIBLE OUT OF EACH RAINFALL.

WHY USE RAINWATER?

- It saves both water and money because rainwater can be repurposed for agriculture.
- Because of climate change, there is an increase in heavy rain and stronger storms, so rainwater harvesting can help stop the excess water from damaging the crops.

NO TILL FARMING

TILLING IS THE CONVENTIONAL WAY OF PREPARING THE SOIL FOR PLANTING BY DIGGING, STIRRING, AND TURNING IT OVER. NO TILL FARMING, IS SIMPLY THE PRACTICE OF FARMING WITHOUT TILLING THE SOIL.

WHY NO TILL?

- Tilling kills unwanted soil life, leaving behind a barren soil. When you don't till the soil, it will preserve the soil's health.
- With no till farming there are:
- higher yields in crop harvests
- more moisture in the soil and more water going into the soil
- This will lead to more fertile and resilient soil with higher productivity.

**In our every deliberation,
we must consider the
impact of our decisions
on the next seven
generations.**

- IROQUOIS MAXIM

THESE TRADITIONAL
AGRICULTURAL
TECHNIQUES ARE
BEING USED AGAIN
ON FARMS THAT
FOCUS SOIL HEALTH
AND SUSTAINABLE
FOOD PRODUCTION.
MOVE ON TO THE
NEXT PART OF THE
CHALLENGE TO FIND
OUT HOW YOU CAN
SUPPORT FARMS LIKE
THESE!

SOURCES

1

ALMANAC

<https://www.almanac.com/native-american-gardening-techniques>

2

RESILIENCE

<https://www.resilience.org/stories/2017-08-14/five-indigenous-farming-practices-enhancing-food-security/>

3

NATIONAL FARMERS UNION

<https://nfu.org/2020/10/12/the-indigenous-origins-of-regenerative-agriculture/>