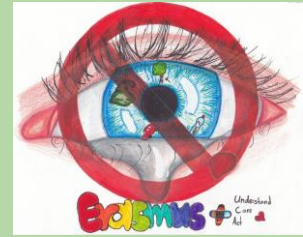




Erasmus+



Loss of Seed Diversity

Platanias, 22 October 2019

Why do we need species diversity?

- We can taste different/better flavors
- There are varieties that fit in and have adapted to the microclimate of each region (endemic)
- Varieties can be adaptable and powerful against diseases
- The period of harvest can be expanded
- Not all varieties will be affected by a possible problem
- Each seed has a story...it is part of our history



What is the problem

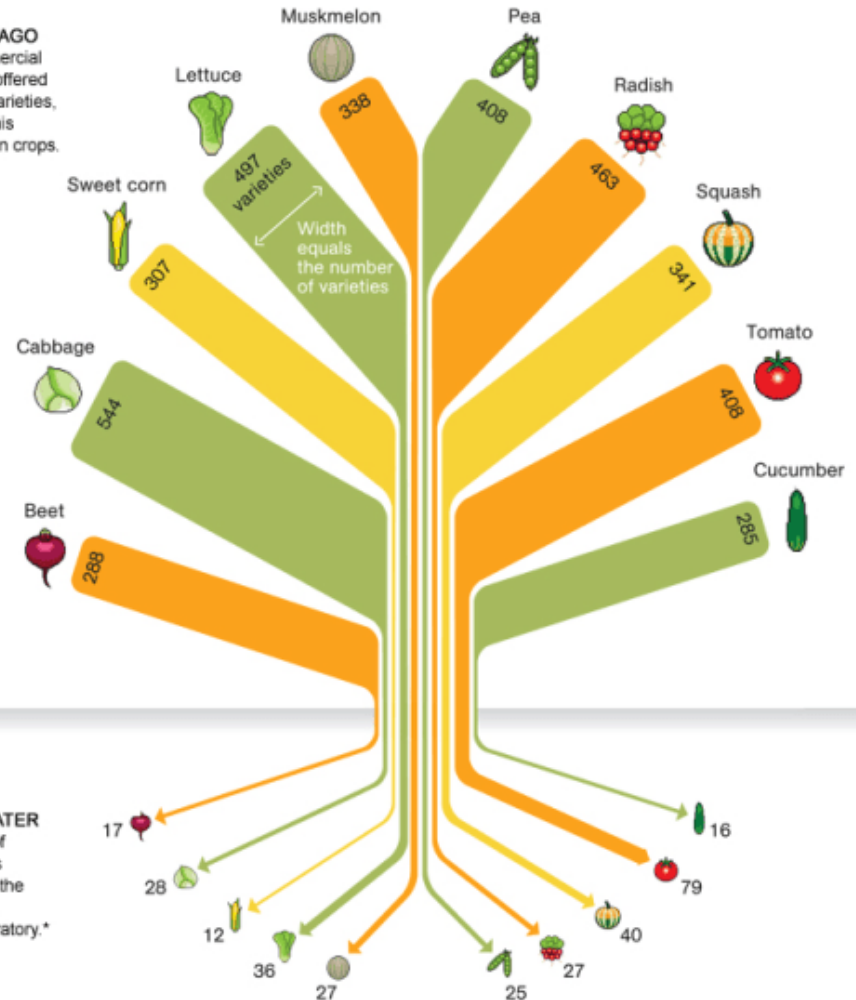
Substitution of traditional seeds with high-yield single varieties leading to the extinction of the firsts

In 80 years

we lost 93% of varieties

in our food seeds.

A CENTURY AGO
In 1903 commercial seed houses offered hundreds of varieties, as shown in this sampling of ten crops.



80 YEARS LATER
By 1983 few of those varieties were found in the National Seed Storage Laboratory.*

* CHANGED ITS NAME IN 2001 TO THE NATIONAL CENTER FOR GENETIC RESOURCES PRESERVATION

JOHN TOMANIO, NGM STAFF. FOOD ICONS: QUICKHONEY SOURCE: RURAL ADVANCEMENT FOUNDATION INTERNATIONAL

Reasons of substitution of local seeds and loss of diversity

- Economic interests of seed companies (nutrition control)
 - companies that produce fertilisers and insecticides
 - insert genetically modified seeds to the market
 - control of 73% (or maybe more) of the world's seed
- Need for increased farming yield for humans and animals
- Misinformation of farmers and stock-farmers



What are the consequences of loss of diversity?

- People are dependent on key crops and more exposed to harvest failures
- Poorer nutrition due to lack of variety
- Extinction of local cultivations which are in compliance with the region's needs

Discouraging numbers....

75% of seeds has been lost...in 50 years!!!

50.000 varieties disappear every year!!!

Greece: only 2-3% of vegetable varieties have survived

China: 90% of rice varieties lost

Mexico: 80% of corn varieties lost

India: 90% of rice varieties lost

USA: 80% of fruit and vegetable varieties lost

The good news

Worldwide: Numerous seed and crop preservation groups

Greece: Several groups all over the country try to inform people and to preserve local varieties/seeds.

Chania: **Mediterranean Agronomic Institute** in cooperation with **University of Crete**

250 seeds (400 cretan species).



Svalbard Global Seed Vault

810752 varieties stored in the ultimate back up of seeds!



Rescued crop worldwide

Until 2014 ...

84 institutes in

71 countries had rescued

59429 seeds in

226 collections

12000 varieties lost forever!



What we should do?

- Consume endemic/local species
- Support seed preservation organisations
- RAISE AWARENESS!