Regenerative farming – benefits by nature!

5C Code

Speaker: Paweł Kaczmarek

The current status

Temperature increase by about **1°C** in the period from 1850–1900 to 2011-2020

Temperature increase by about **6-7°C** by 2100

Increasing air temperature will result in **increasing CO2 emission from the soil**

What are the reasons?

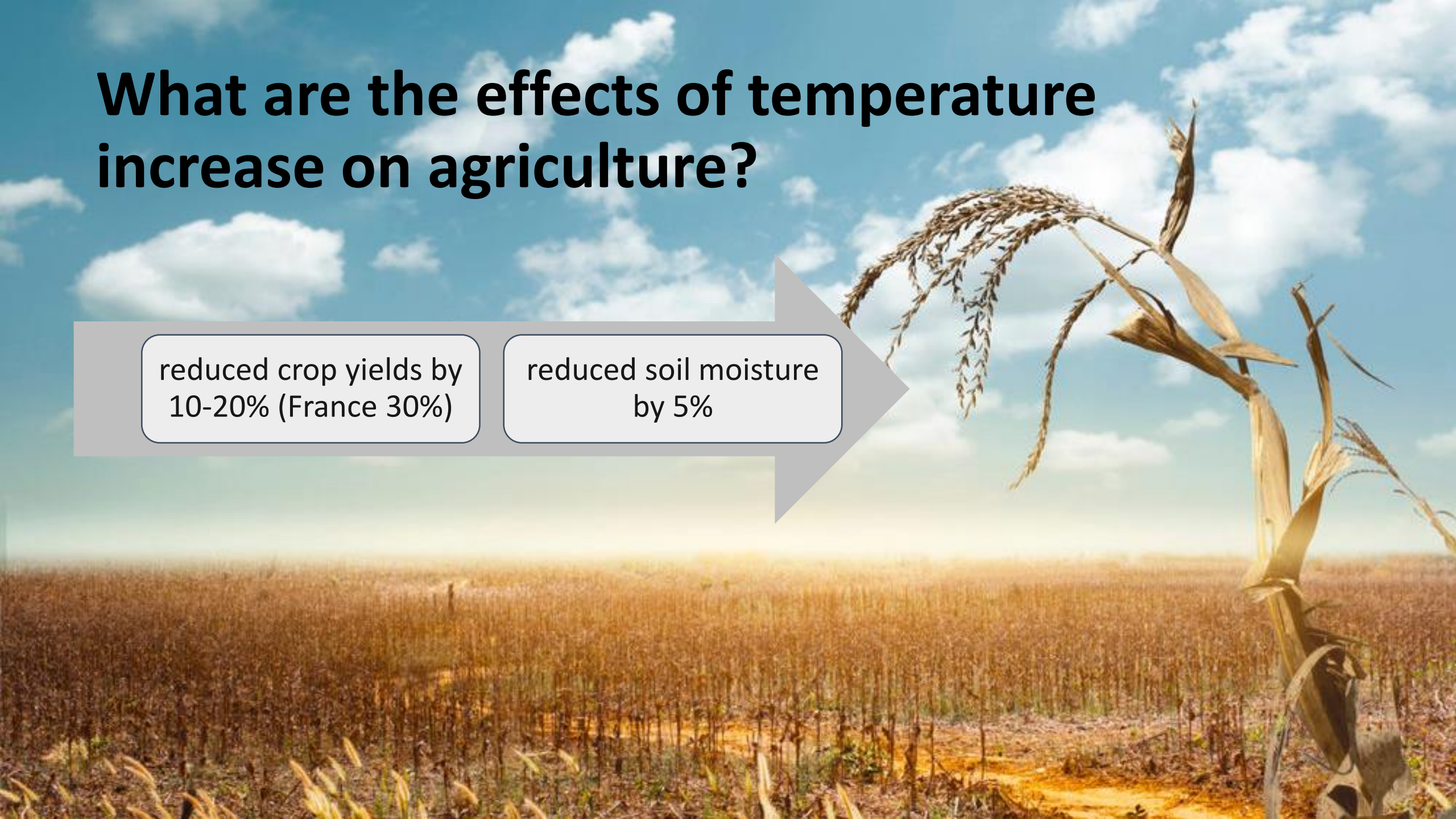
Sources of greenhouse gas emissions:

44-57%
global food system

11-18%
land cultivation

15-18%
deforestation

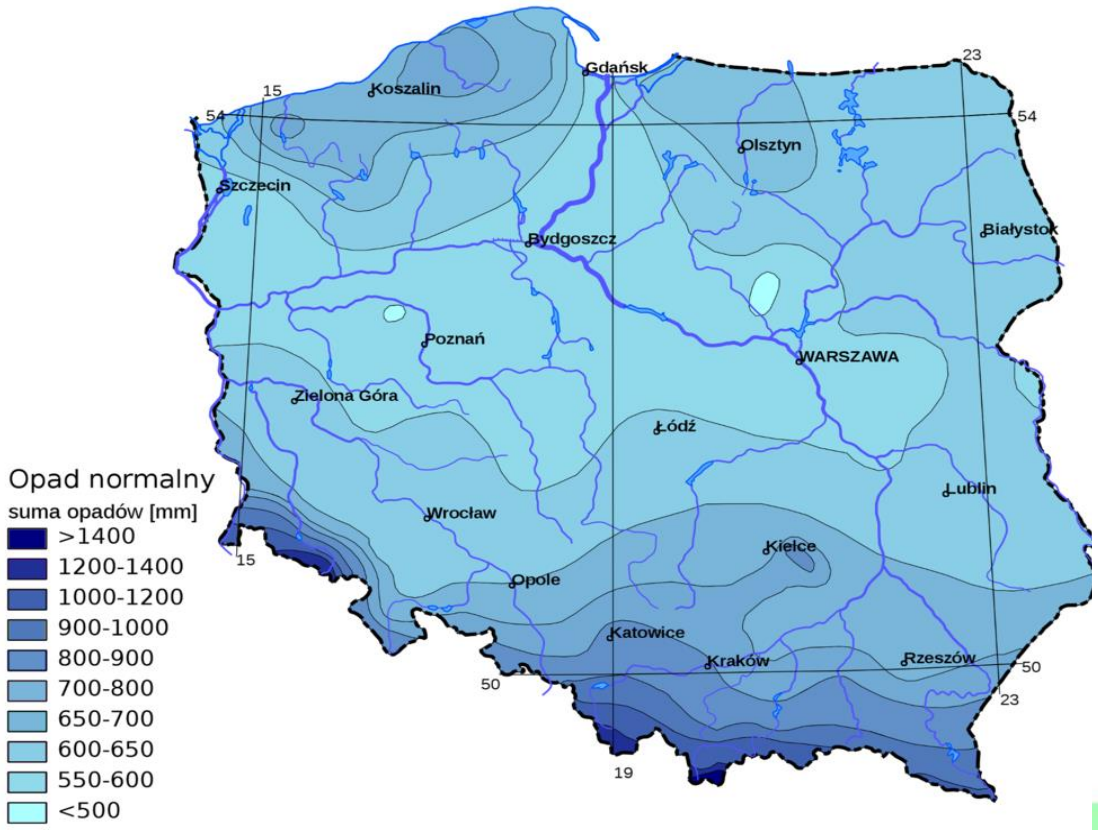
What are the effects of temperature increase on agriculture?



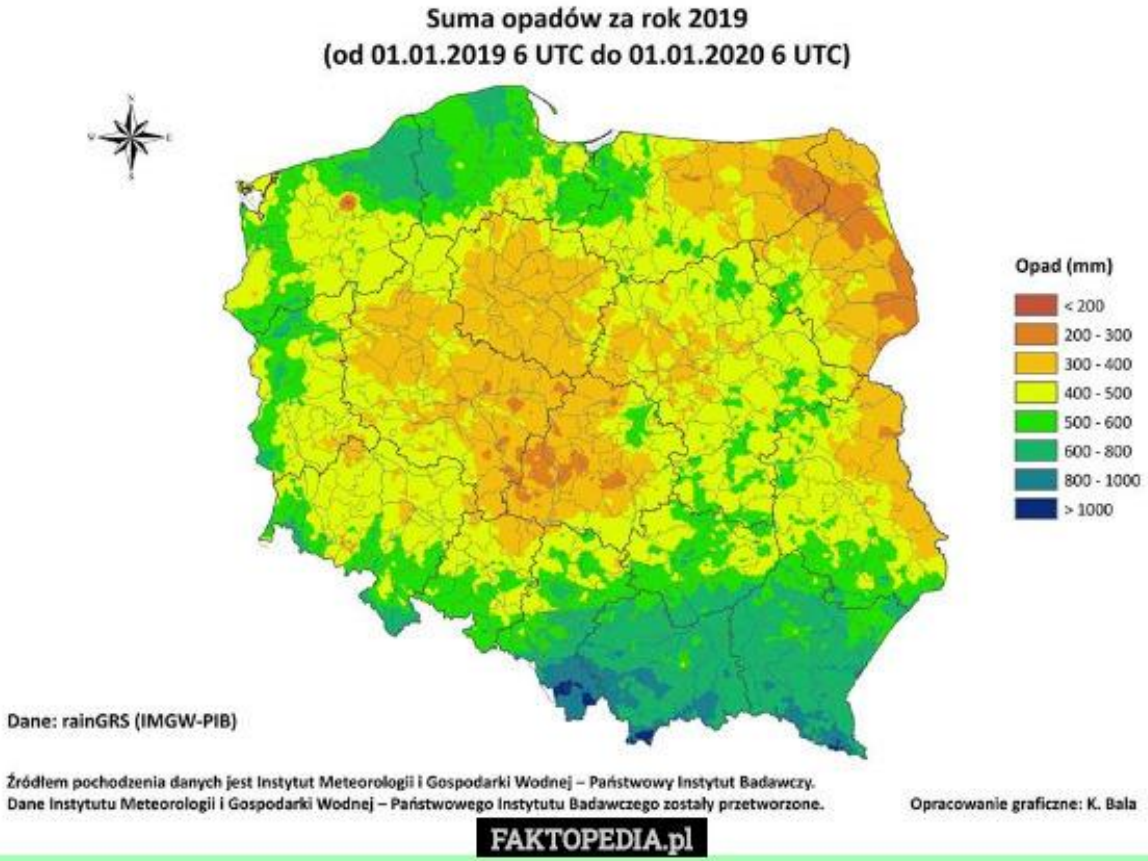
No matter where they work, each farmer needs soil

Soil is often degraded

Poland – multi-year precipitation [1967-2010 vs 2019] according to IMGW

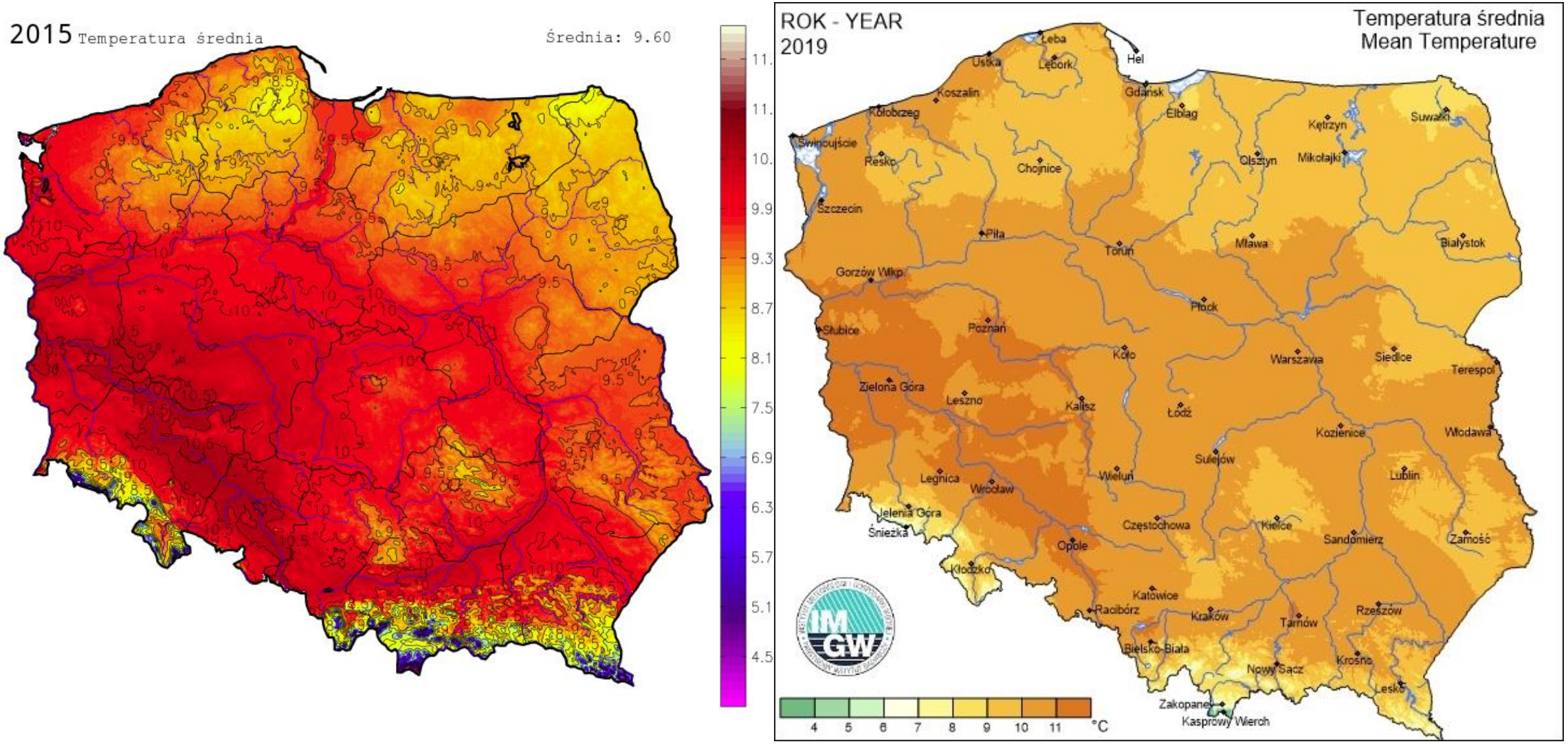


Average annual precipitation 1967 – 2010 [mm]

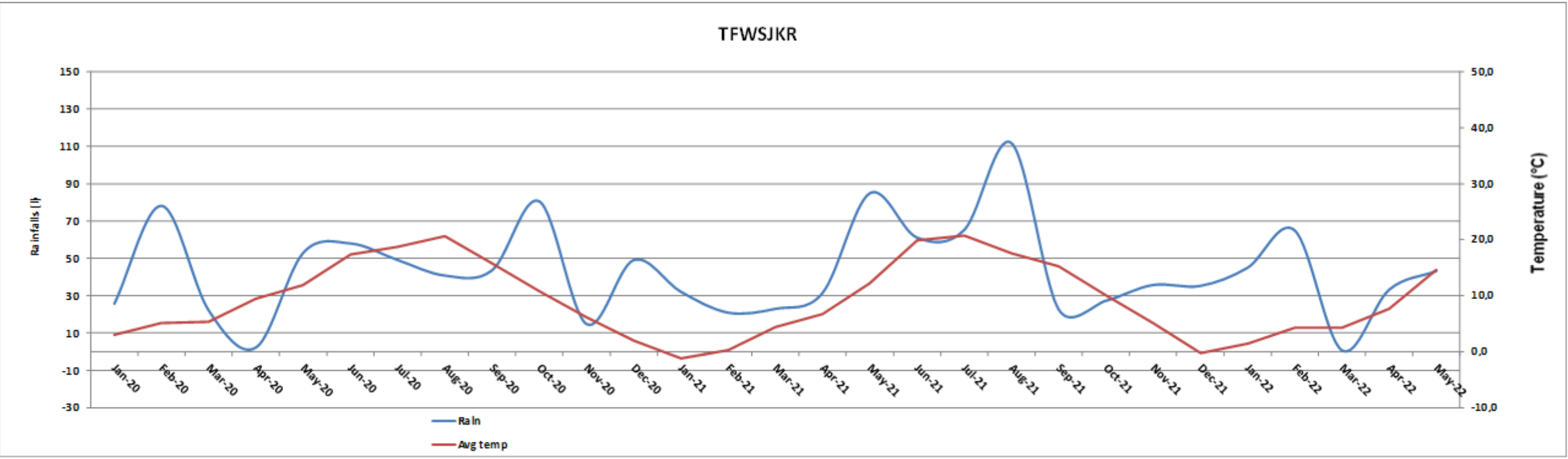


Suma opadów w poszczególnych obszarach Polski w całym roku 2019.

Poland – mean annual temperature [2015, 2019] according to IMGW



Walter's climate diagram for MidWest 2017-2021



Regenerative agriculture and agri-food industry

GEIGY PHARMACEUTICAL COMPANY SZWAJCARIA BADANIE W MG NA 100G	1985	1996	2002	SPADEK %
 **BROKUŁY**				
WAPŃ	103	33	28	- 73%
KWAS FOLIOWY	47	23	18	- 62%
MAGNEZ	26	18	11	- 55%
 **ZIEMNIAKI**				
WAPŃ	14	4	3	- 78%
MAGNEZ	27	18	14	- 48%
 **KORZENNE**				
WAPŃ	37	31	28	- 24%
MAGNEZ	21	9	6	- 75%
 **SZPINAK**				
WAPŃ	62	19	15	- 76%
WITAMINA C	51	21	18	- 65%
 **BANAN**				
WITAMINA B6	330	22	18	- 95%
WAPŃ	8	7	7	- 12%
KWAS FOLIOWY	23	3	5	- 79%
MAGNEZ	31	27	24	- 23%

UTRATA WARTOŚCI ODŻYWCZYCH W WARZYWACH I OWOCACH

Benefits of regenerative agriculture

Financial

Achievable now

1 – Increased crop yields

2 – Reduced expenses

3 – Sale of carbon credits

Achievable soon

3 – Eco-schemes

4 – Higher price of certified products

Furthermore

The farmer

- Higher fertility with lower costs
- Less sensitive to changing production conditions
- Balancing agriculture and environment
- Reputation/perception as friendly

Producer

- Reduced carbon footprint in the supply chain
- Stable supply of high quality raw materials certified by an independent body

Consumer

- High quality healthy food
- Environment is less exposed to degradation
- Combating global warming

What is

a healthy soil

1 000 000 000 bacteria are in 1 gram of healthy soil

What is biologization - regenerative agriculture?

Holistic soil management system

Using first of all biological methods

Using chemical methods if no biological alternatives are available

Ensures food safety

Protects environment

Balances fertilising

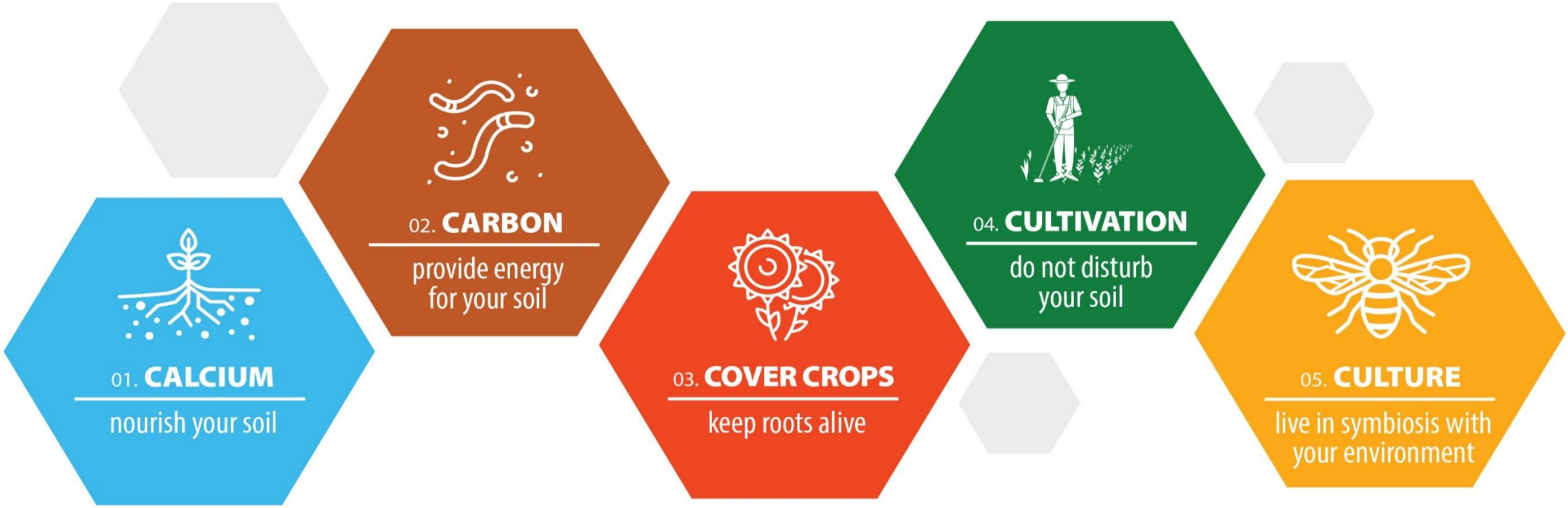
Develops microorganisms

Improves quality of soil and in consequence of food

Objectives of biologization

5C biologization code is a holistic soil management system

The Code is based on the experience of the Top Farms Group and is a fundamental part of the 5C Biologization programme implemented by Terra Nostra Foundation.

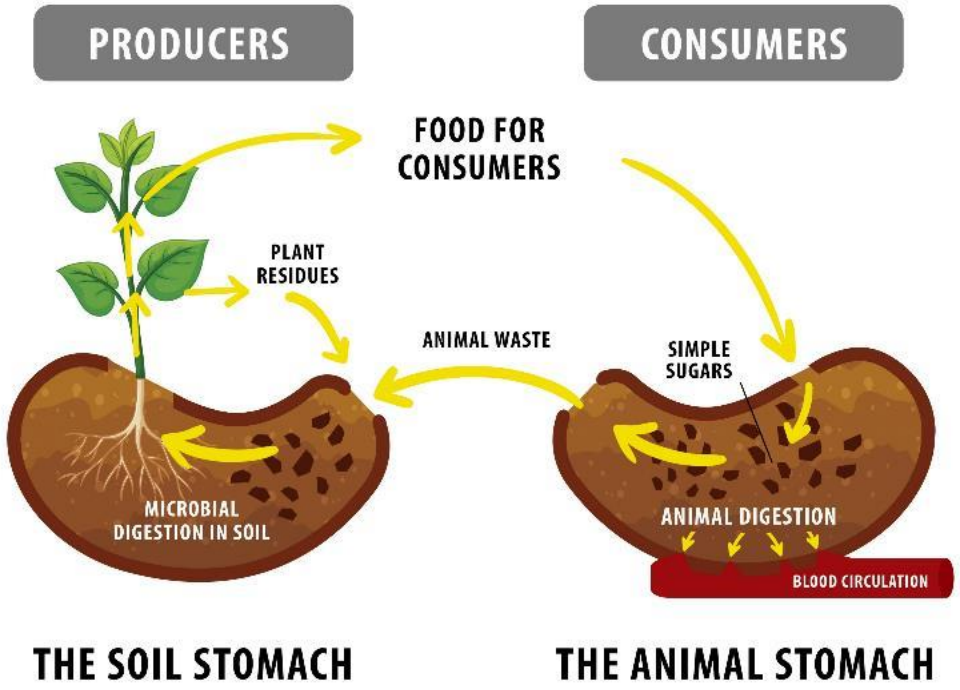


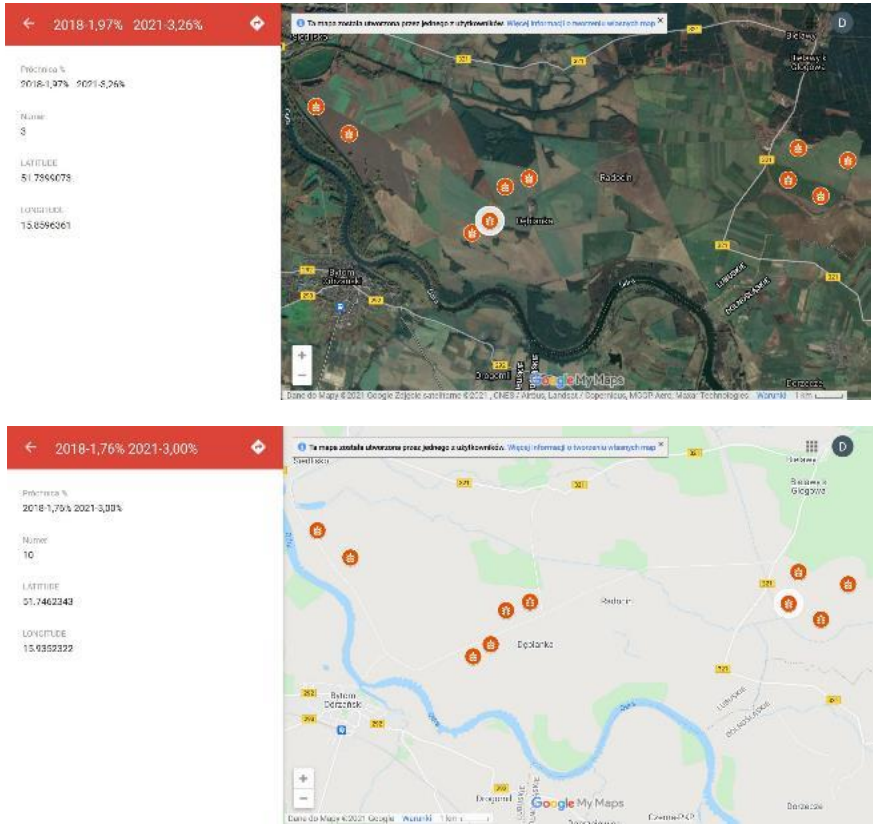
1C - calcium


0.31 ha
1
7.5 km/h
Prosto
Pas: 1 L
Reset
A B
Podsunięc 10 cm
Całość: 0 cm
2000.00 kg/ha
2000.00 kg/ha
Ag Leader

2C - carbon

Treat your soil as you would... a cow





3C - cover-crops

Cover-crops benefits

- ✓ Nutrients cycle engagement
- ✓ Increase organic matter content
- ✓ Erosion reduction
- ✓ Weeds suppression
- ✓ Increased soil absorption
- ✓ Biodiversity

Distance between fields is 2 km, the same soil type

4C – cultivation…

as little as possible, as much as necessary

Maize Summer 2021. Distance between fields is 2 km, the same soil type.

5C - culture