



VYTAUTAS MAGNUS
UNIVERSITY
AGRICULTURE
ACADEMY

Sustainable practices of Lithuanian agriculture and bioeconomy

Prof. PhD Kęstutis Romaneckas

Local system of bioeconomy and renewable energy in rural areas – good practices in value chains and policies



BRANCHES
BOOSTING RURAL BIOECONOMY NETWORKS

24 April, 2022

Warmia and Mazury Agricultural Advisory Center, ul. Jagiellońska 91, 10-356 Olsztyn

HAIL



FROSTBITE and EMBOSSING





Inovative technology:
subsoiling+disking+
3-D sowing

Conventional technology



View in spring time

Decrease of soil hydrological properties / infiltration





Damaging of soil structure







Formation of soil crust



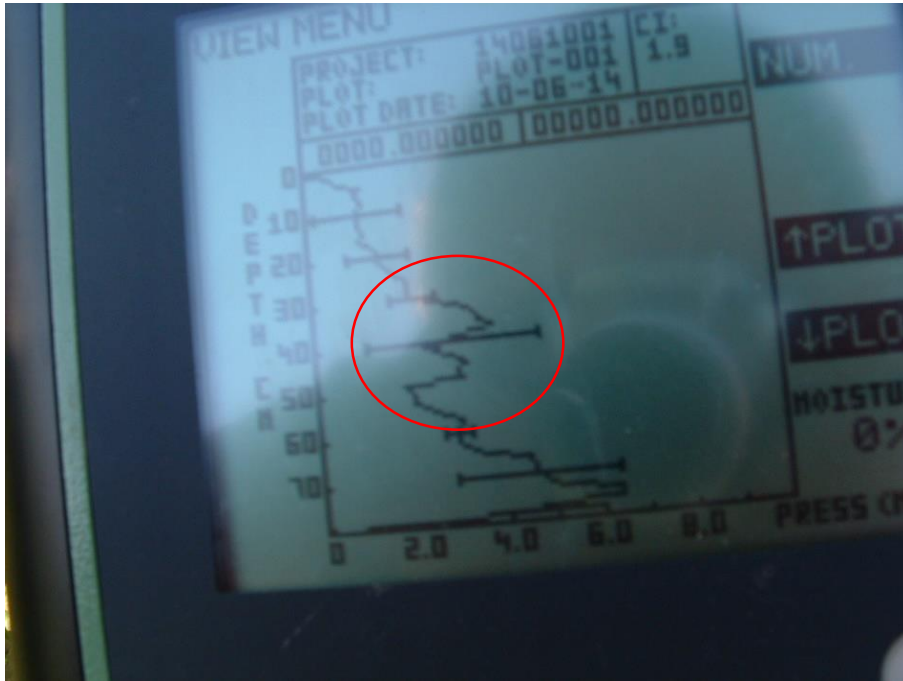
Wind erosion



Result of intensive tillage



Soil compression and hardpans













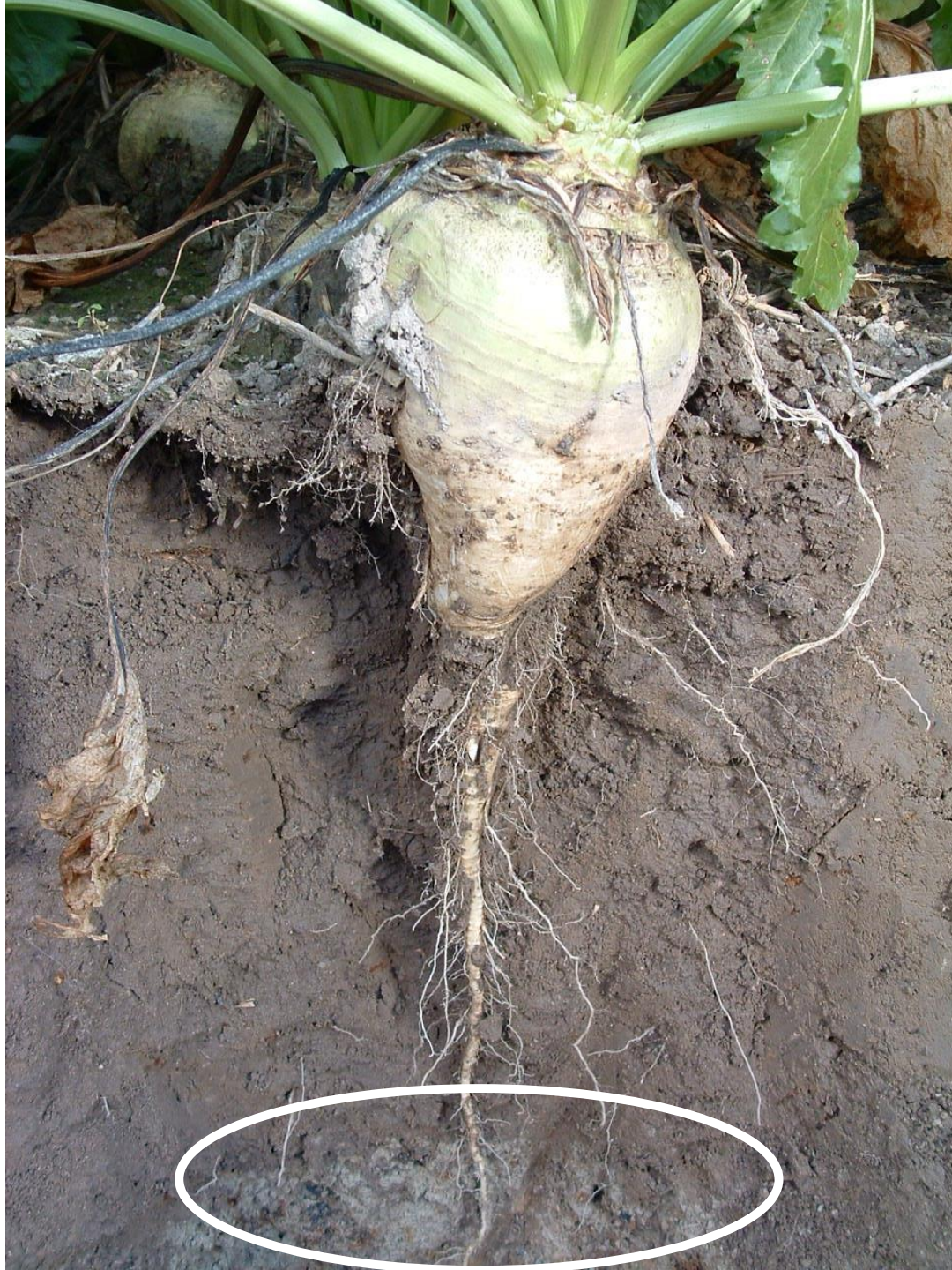
Sub-soiling – good choice



**Deeply
ploughed**



**Subsoiled
up to 40 cm**





Weed and crop interaction



Alternatives are direct or stubble sowing and the cultivation of intercropping ("living mulch"). 2003-2005 m. (Romaneckas, Šarauskis et al.), 2009-2011, (Adamavičienė, Romaneckas et al.), 2015-2017 (Eimutytė, Romaneckas et al.)



Inter-row steaming



Multi-cropping



Mono-crop (maize)



Binary-crop (maize+hemp)



The same later



Binary-crop (hemp+faba bean)



Later



Ternary-crop (maize+hemp+faba bean)



Later

Permaculture



Tomatoes in wild grassland – relation of the wild and domestic nature



Tomatoes-pumkins-weeds: all together



Potatoes, replaced on the grassland surface and mulched

Thank You



Photo from the visit to Polish organic farm – nice practice