



Rehabilitating eroded soils of hillside land

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Budapest, 09.09.2021.

An aerial photograph of a region in Hungary, showing a patchwork of green fields and pinkish-brown agricultural plots. A large blue body of water is visible in the upper left. A series of light blue, irregularly shaped regions are outlined in the lower half of the image, representing the Koppány valley. The text is overlaid in yellow on the left side.

HUNGARY - SOUTH TRANSDANUBIA

Koppány-valley

Topography: loess hills

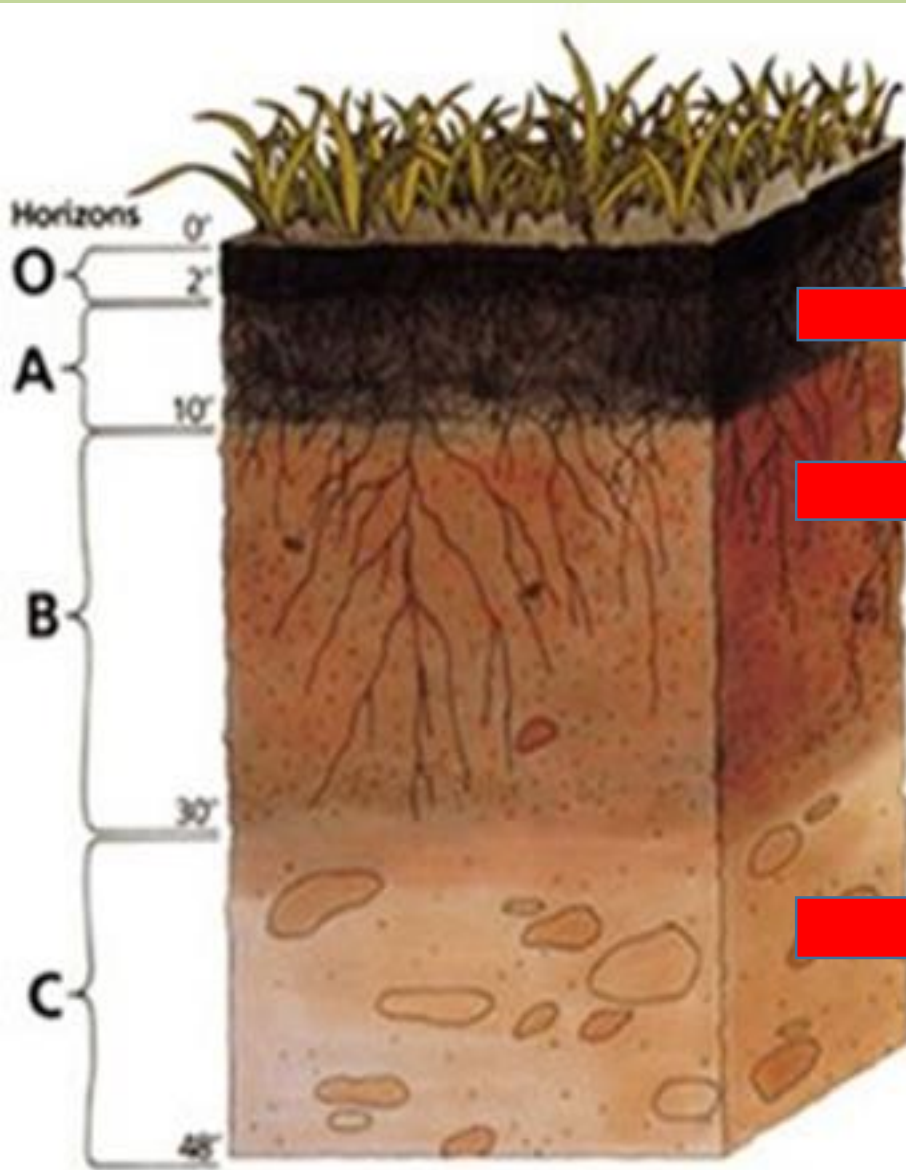
CHALLENGE: Unsustainable biomass production

„DISRUPTIVE”
TECHNOLOGIES





SEVERE SOIL EROSION





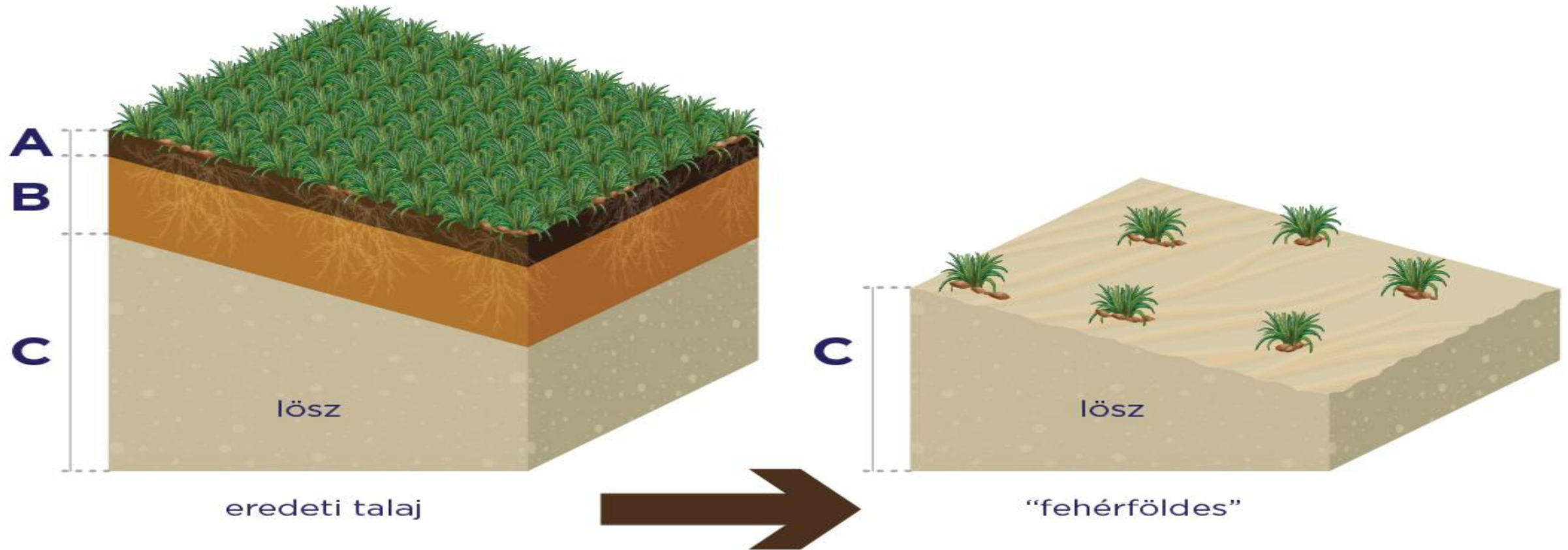
SOLUTION 1:

**Rehabilitating severely eroded hillside land (whitefields) by a
new amelioration method**

European Innovation Partnership project

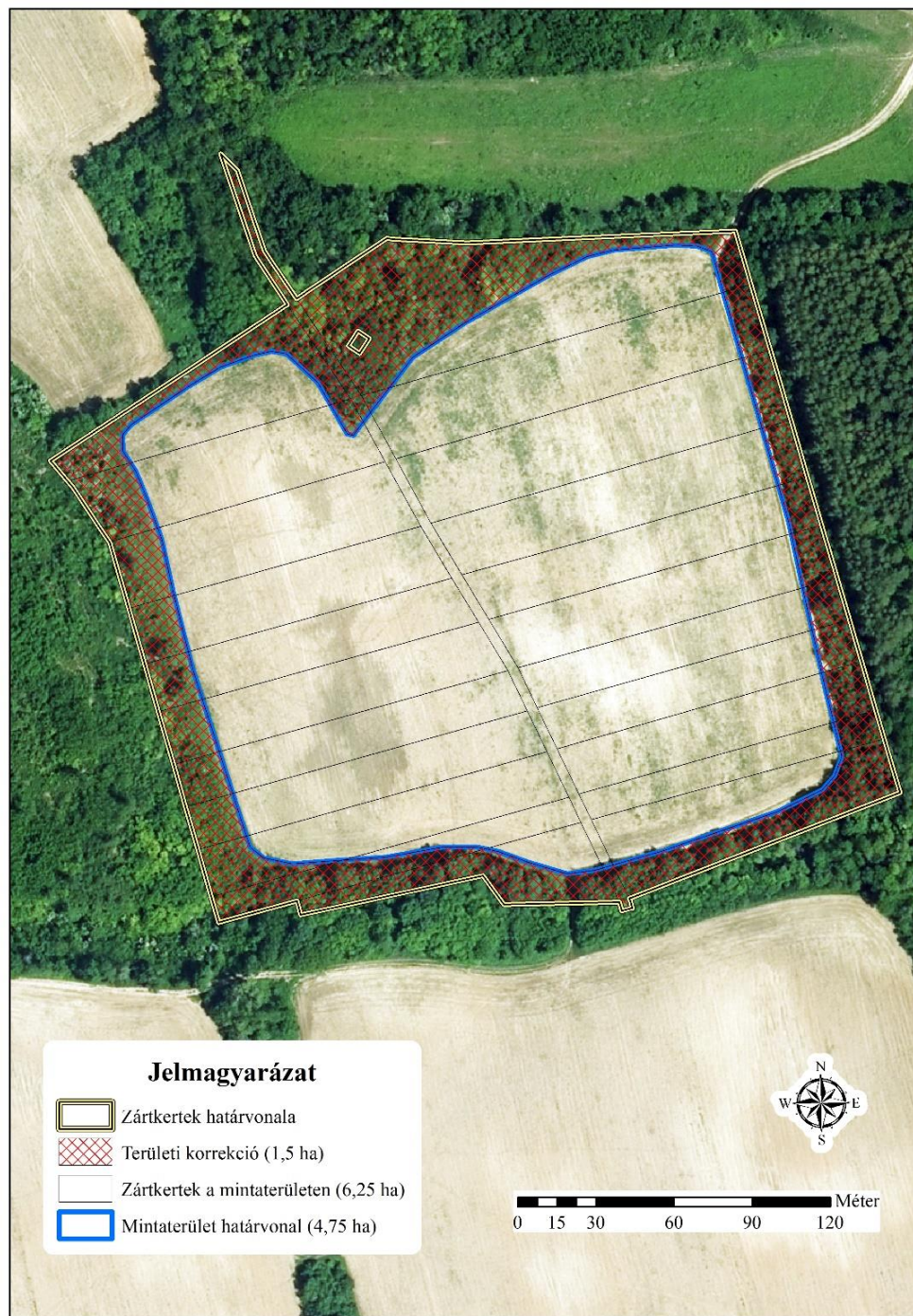
Degradation of hillside soil

DOMBOLDALI SZÁNTÓK TALAJDEGRADÁCIÓJA



New amelioration method for „whitefields”

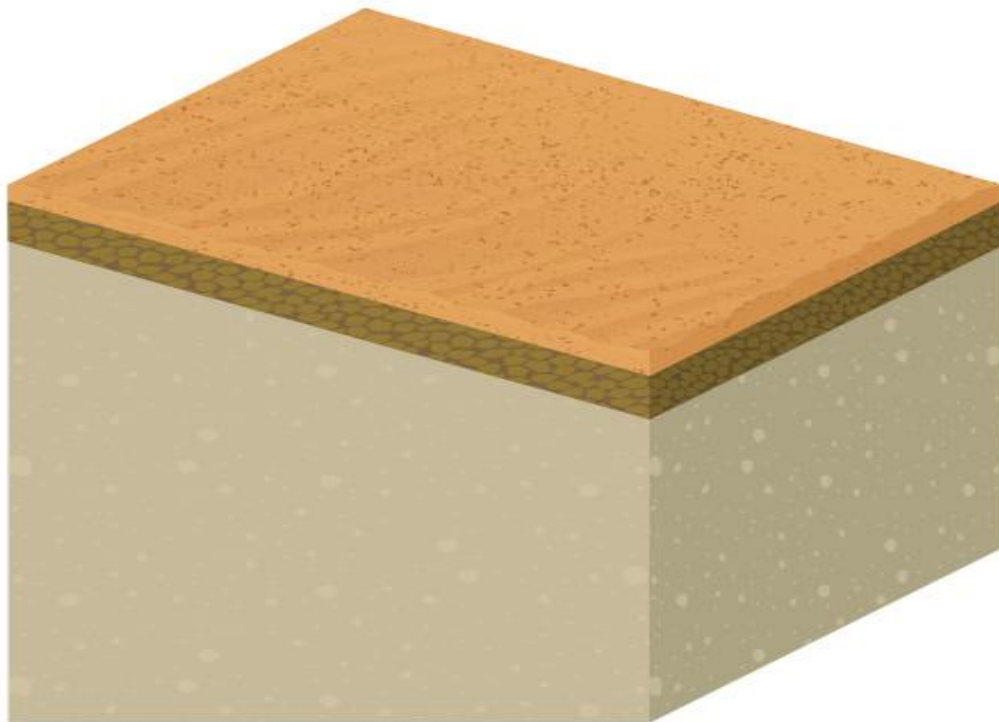
- **„biomass layer”: green mulch + chipwood + hay + microbiological additives (cellulose decomposer bacteria)**
- **deep tilling: first year min. 80 cm, second year 35 cm**



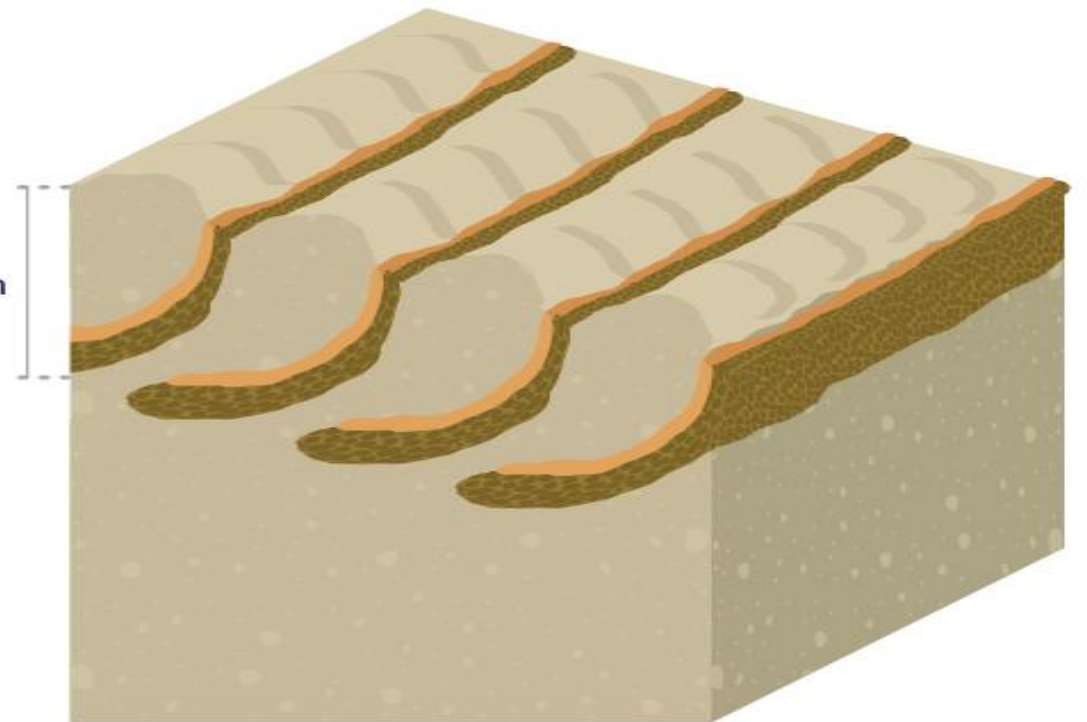
FIRST YEAR



TALAJJAVÍTÁS 1. ÉV



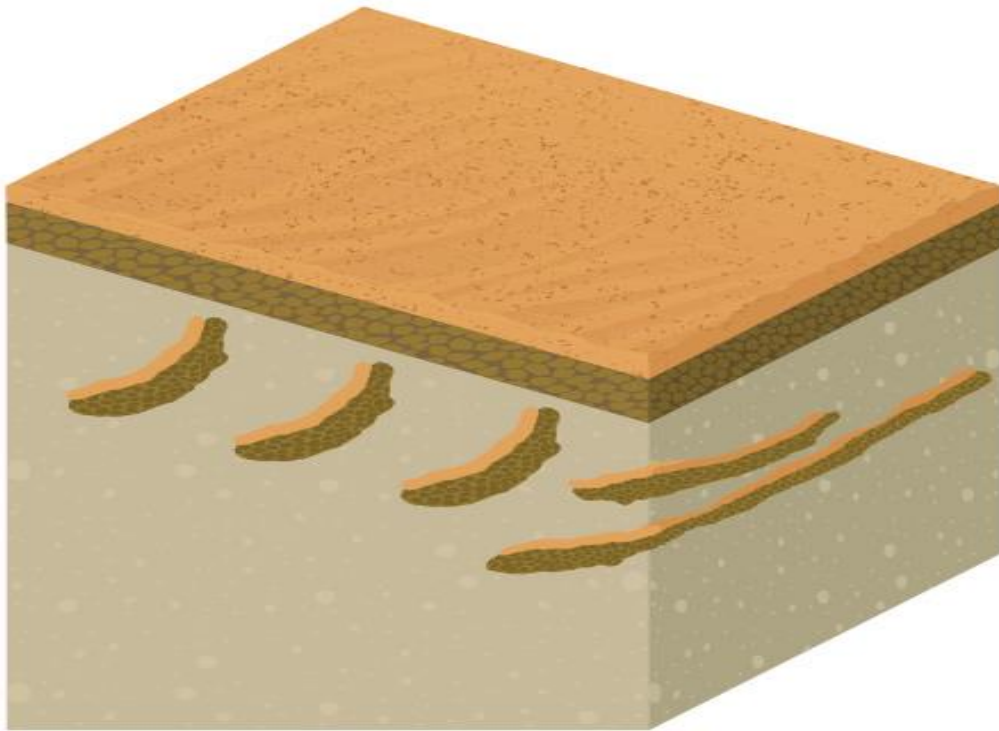
~80cm



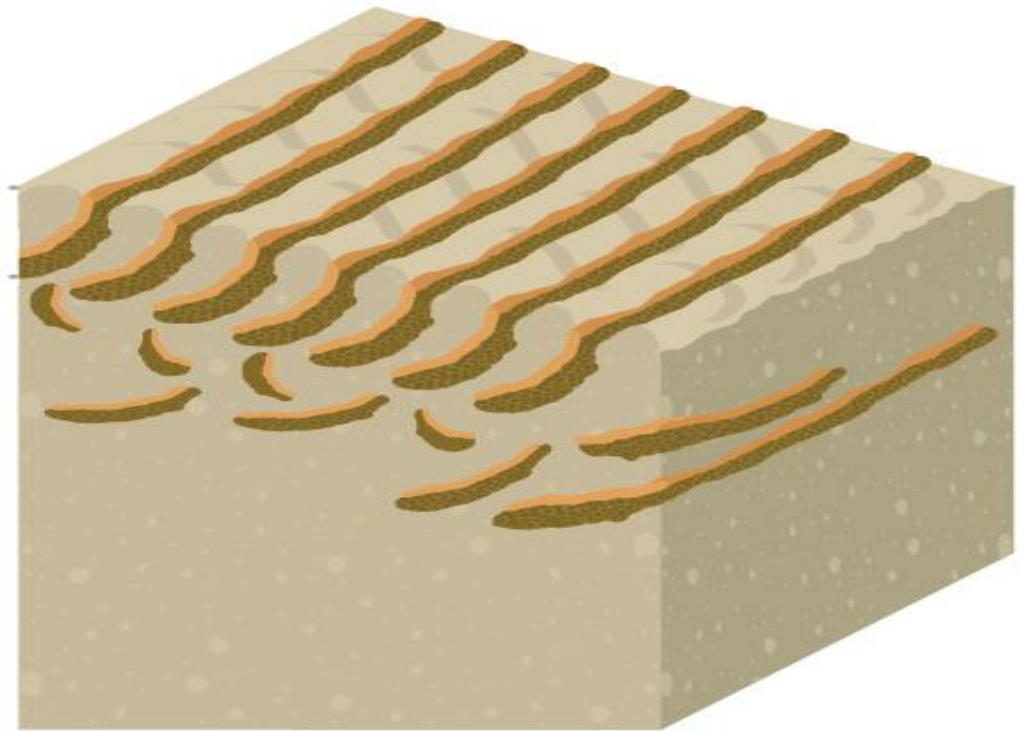
SECOND YEAR



TALAJJAVÍTÁS 2. ÉV



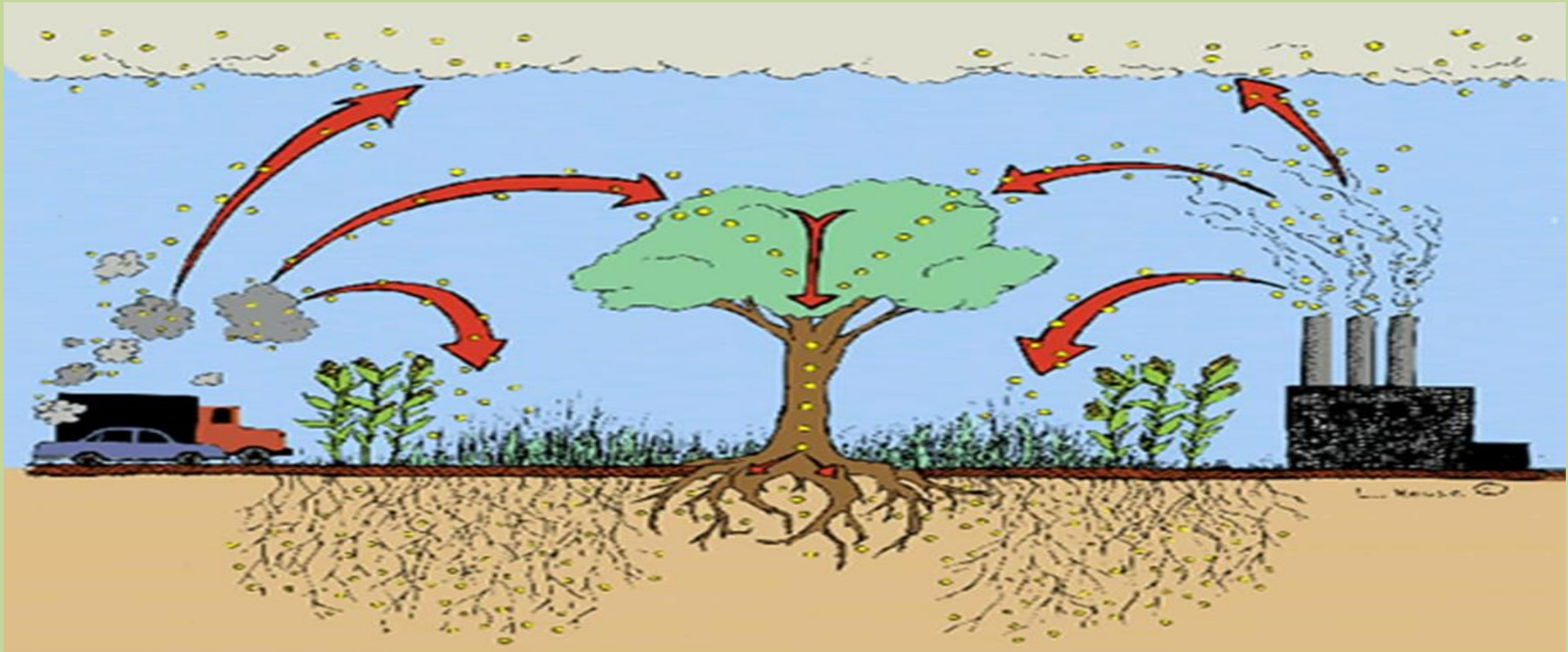
~50cm



CARBON SEQUESTRATION

Forest Soil C (30 cm with dead leaves) cca. **50t/ha**

Rehabilitation project C intake cca. **15t/ha**



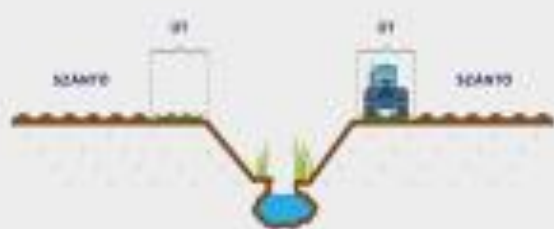
SOLUTION 2:

Creating buffer zones on arable land to moderate erosion and diffuse contamination

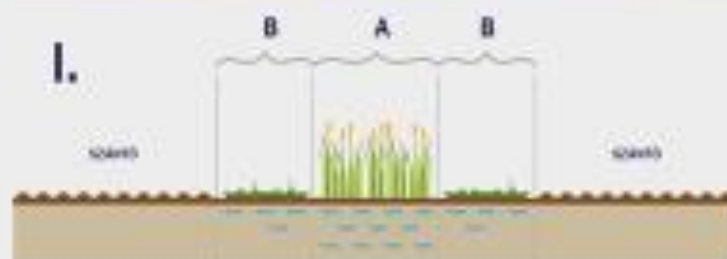
ENHANCING CLIMATE RESILIENT LAND USE



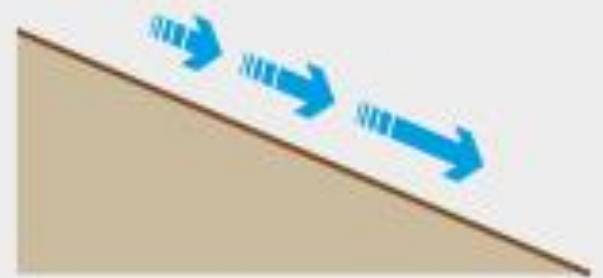
I.



I.



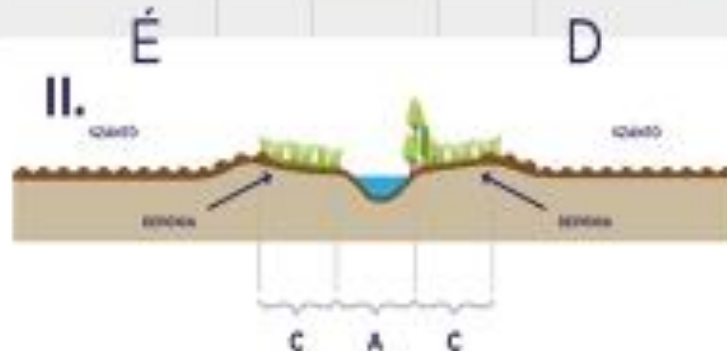
I.



II.



II.



II.





ECOLOGICAL BUFFERZONE = NONPRODUCTIVE?



Galega orientalis

Silphium perfoliatum

BIOGAS+PROTEIN+FARMSCAPING effect



A KOPPÁNY PROGRAM ANYAGFORGALMA

