

# **Výukový materiál zpracovaný v rámci operačního programu Vzdělávání pro konkurenceschopnost**



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

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# Technical English



Předmět:	Anglický jazyk
Ročník:	1.,2.,3.,4.,ročník
Klíčová slova:	soil, land , cultivation
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# Technical English

## land and soil



### Land

- Land is one of the three most important agents utilised in agriculture. (land, capital, labour)
- Land can be used in many ways. (arable land, permanent meadows, pasture, orchard, ...)

### Soil

- The layer of the earth's surface in which plants grow.
- It is a highly organised physical, chemical and biological complex which has been developing under the influence of climate, vegetation, drainage, time and culture.

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### Soil type

- clay, loam, clay-loam, silt-loam, and so on.
- usually refers to the different sizes of mineral particles in a particular sample.
- Soil is made up in part of finely ground rock particles, grouped according to size as sand and silt in addition to clay, organic material such as decomposed plant matter.



# Technical English

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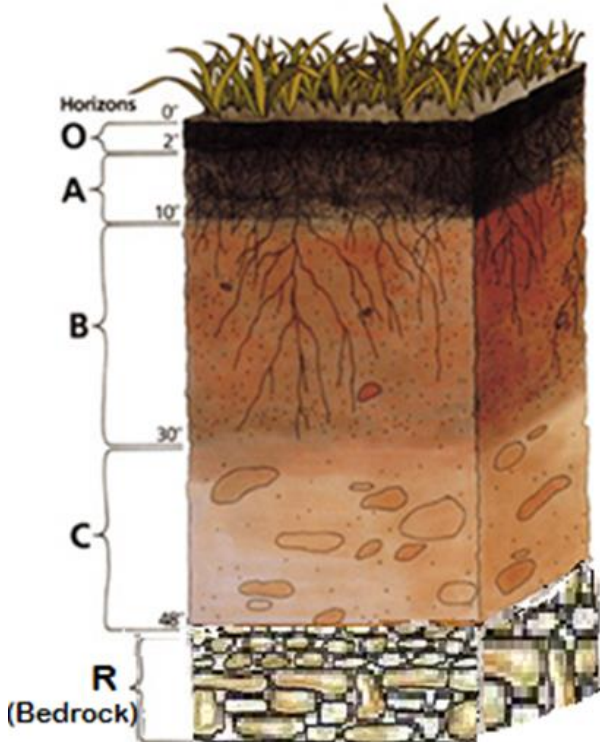
### Examples of soil types:

- Clay = a type of sticky soil used to make pots, bricks, or tiles.
- Humus = a type of soil made of dead plants or other organic matter.
- Loam = a type of soil that has silt, clay or sand.
- Sand = a type of soil made of very small pieces of rock or mineral.
- Silt = is made when soil mixes with a body of water and then is deposited.

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Examples of soil types and soil horizons:



sand      dirt      clay



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### Physical properties of soils

- **Texture** is classification of the size of particles within the soil
- **Structure** is how the particles in soil are connected to each other and how much space is between them.
- **Density** is the weight per unit volume of an object.
- **Porosity** is open space occupied by either gases or water.

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- **Consistency** is the ability of soil to stick to itself or to other objects and its ability to resist deformation and rupture.
- **Temperature** regulates seed germination, root growth and the availability of nutrients.
- **Colour** is often the first impression one has when viewing soil and is determined by organic matter content, drainage conditions, and the degree of oxidation.
- **Resistivity** is a measure of a soil's ability to retard the conduction of an electric current.



# Technical English

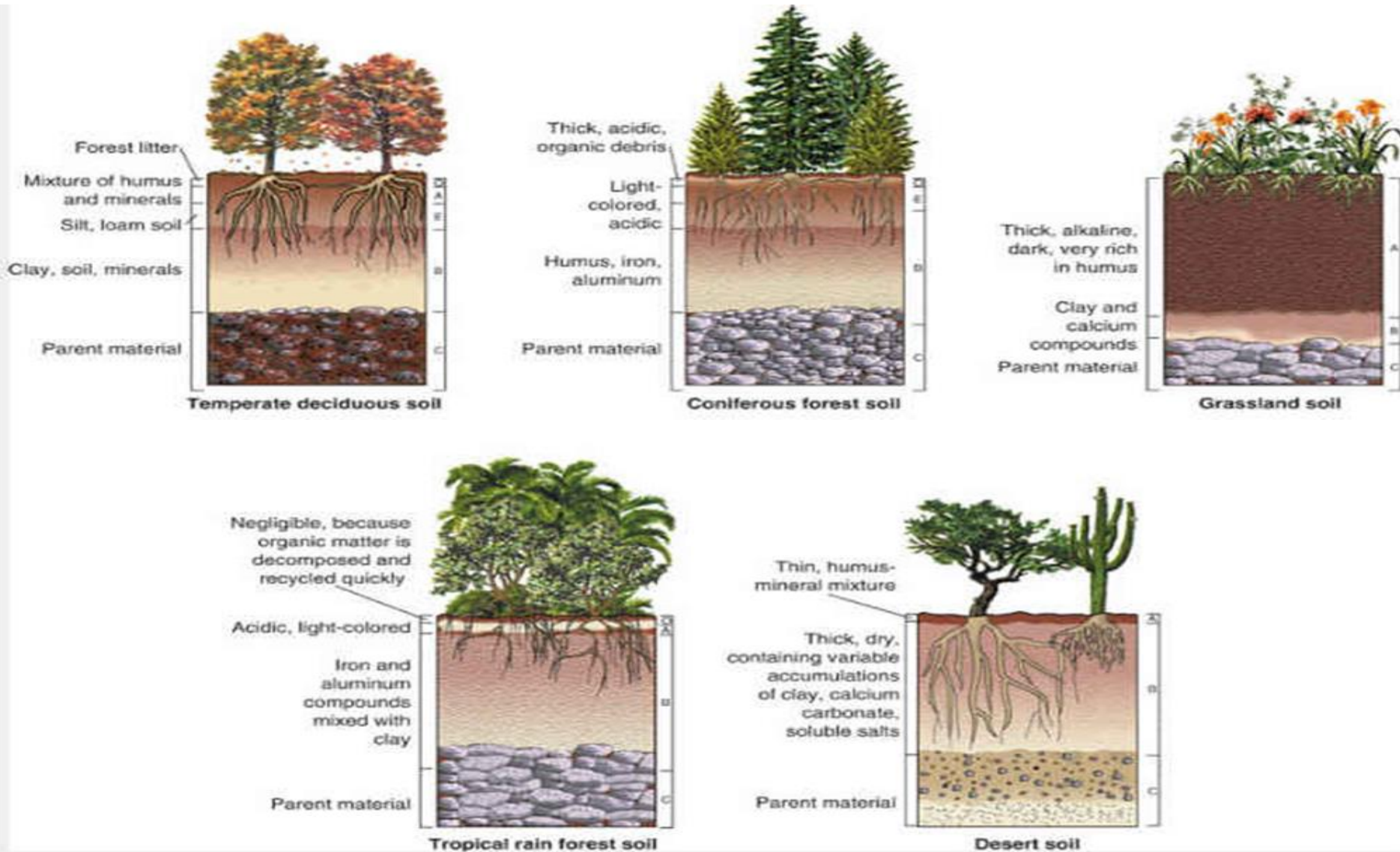
## land and soil

### Soil texture describes:

- the size of the soil particles.
- Where larger mineral particles predominate, the soil is gravelly ( $d > 2\text{mm}$ ), or sandy ( $0.05 < d < 2$ );
- where smaller, colloidal mineral particles are dominant, the soil is claylike ( $d < 0.002$ ).
- Soils can have any combination of gravel, sand, and clay and a textural chart is used to describe the different soil textures as shown below:

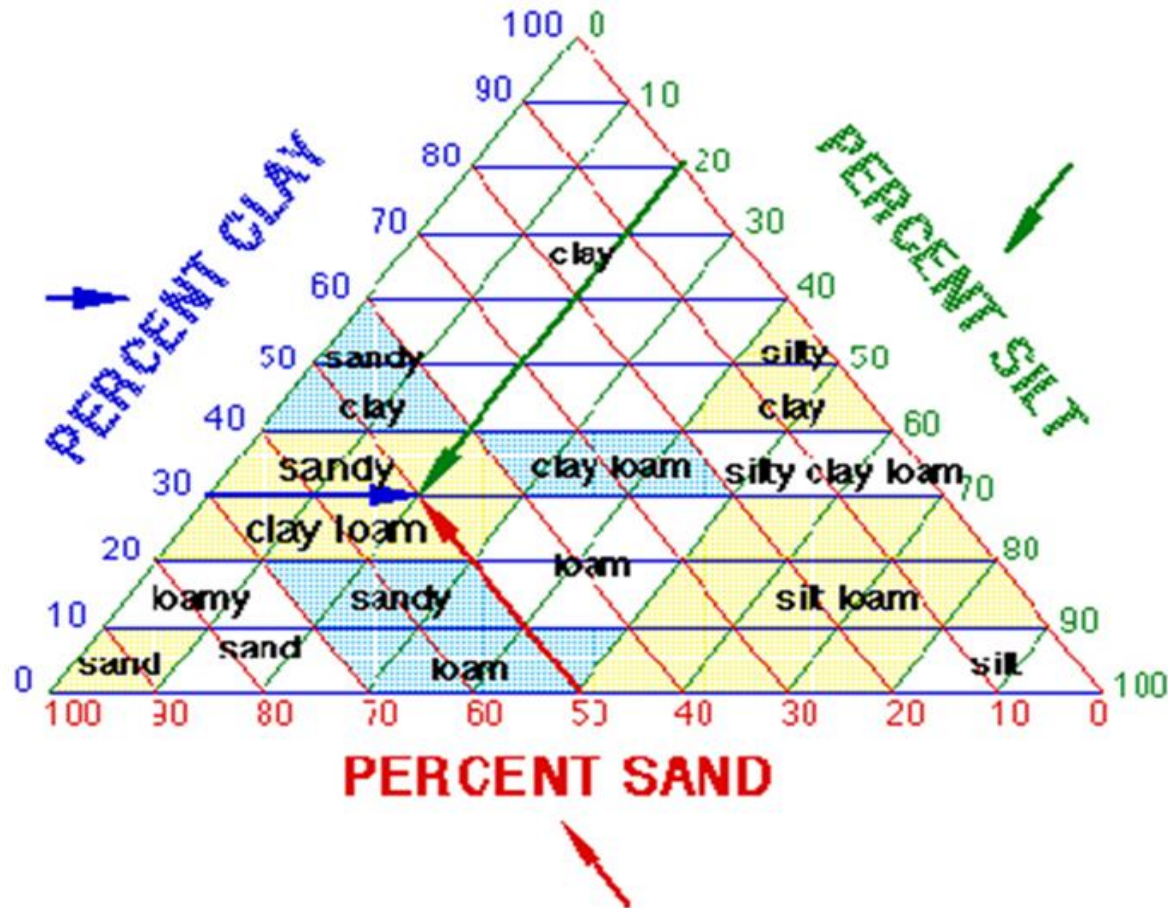
# Technical English

## land and soil



# Technical English

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# Technical English

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### Soil Cultivation

- Tillage is the agricultural preparation of soil by mechanical agitation of various types, such as digging, stirring, and overturning.
- The aim of cultivation is to create a suitable conditions for the establishment and growth of crops and to get rid the soil of the weeds.
- To cultivate the soil you need: tractor, plough, cultivator, harrows

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## Soil Management

= all operations, practices and treatments used to protect soil and enhance its performance.

## Soil management practices that affect soil quality:

- **Controlling traffic** on the soil surface helps to reduce soil compaction, which can reduce aeration and water infiltration.

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- **Crop rotations** for row crops alternate high-residue crops with lower-residue crops to increase the amount of plant material left on the surface of the soil during the year to protect the soil from erosion.
- **Tillage**, especially reduced-tillage or no-till operations limit the amount of soil disturbance while cultivating a new crop and help to maintain plant residues on the surface of the soil for erosion protection and water retention.



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- **Cover crops** keep the soil anchored and covered in off-seasons so that the soil is not eroded by wind and rain.
- **Nutrient management** can help to improve the fertility of the soil and the amount of organic matter content, which improves soil structure and function.

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### Advantages of Soil Management

- 1) Maintain Soil Fertility
- 2) Restore Soil Fertility
- 3) Make the agricultural process an economic one
- 4) Helps increase Yield





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### Vocabulary

English	Czech	English	Czech	English	Czech
criteria	Znaky	mud	Bláto	density	Hustota
dirt	Hlína	sandstone	Pískovec	porosity	Pórovitost, poréznost
granite	Žula	silt	Silt, nános	consistency	konzistence
gravel	Štěrk	texture	Textura	resistivity	Odolnost
horizon	(půdní) horizont	drainage	Odvodnění	tillage	Obdělávání půdy
limestone	Vápenec	particles	Části	enhance	Zlepšit
loam	Písčitohlinitá půda	decomposed	Rozpadlý, rozložený	fertility	úrodnost

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### Practice 1

*(fill in the blanks with the correct words and phrases from the bank)*

clay	loam	humus	Soil structures
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- 1) Some \_\_\_\_\_ hold more water than others.
- 2) Crops don't grow well in pure \_\_\_\_\_ soil.
- 3) Use \_\_\_\_\_ to add nutrients to soil.
- 4) \_\_\_\_\_ is a mix of three soil types.

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### Practice 2

*(match the words with the definition)*

- |                 |  |
|-----------------|--|
| 1) Soil         | A. A material made of small pieces of rock and mineral |
| 2) Sand         | B. A material that is deposited by water               |
| 3) Soil texture | C. A layer of material that plants grow in             |
| 4) Dense        | D. The size of particles in a soil                     |
| 5) Silt         | E. Having a lot of material in a small space           |

# Check your answers

## Practice 1

1) loam, 2) clay, 3) soil structure, 4) humus

## Practice 2

1C

2A

3D

4E

5B

# Použité zdroje



- Veškeré použité obrázky (kliparty) pocházejí ze sady Microsoft Office 2010.
- Všechny fotografie pochází z archivu autora
- Voráček J., *Zemědělská angličtina*, Profi Press s.r.o., Praha:2004
- O'Sullivan N., DiLibbin J., *Agriculture*, Express Publishing, 2011

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