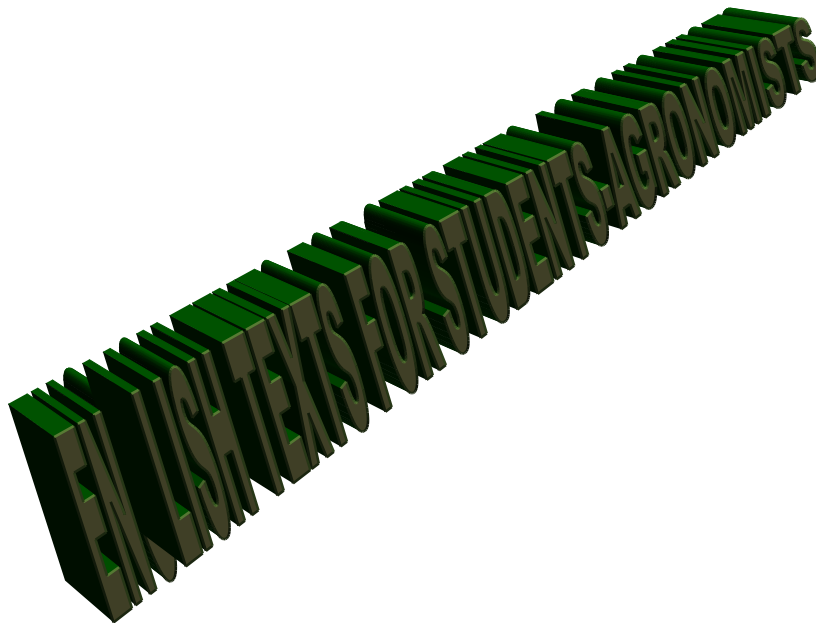


**HUE UNIVERSITY
COLLEGE OF AGRICULTURE AND FORESTRY**



**ENGLISH FOR SPECIFIC PURPOSES
ENGLISH TEXTS FOR STUDENTS-AGRONOMISTS**



**NGUYEN TRUNG TINH
9 / 2002**



PREFACE

The aim of this book is to help students of agriculture develop the four language skills and the ability of using the language knowledge in their communication about their specialist subject as well. The book consists of 15 units, each of which is divided into two parts: part A should be presented in class; part B is for self-study at home. The activities in each unit are designed for students to practice in real-life context, which may make the target language more authentic. The exercises focus on improving the grammar in use and the language skills the students need, especially reading and writing, which may help them in participating in some projects and workshops on rural development being held by foreign organizations in Vietnam.

The material collected is based on the language the students need for their future job, relevant to the intermediate level of the basic language course they have studied at the university.

The material designed only aims to meet the urgent needs of the students of Hue college of Agriculture and Forestry, so it must have some constraint and limitation. I hope the readers who are concerned about the subject find the material useful and may add some more what you have got in the field to complete it as an English material for all students of agriculture in our country.

NGUYEN TRUNG TINH

9/2002

§ UNIT 1 SOILS

I. Word study

1. Find the words which have similar meaning.

- a. store (v) - thing / substance
- b. cleanse (v) - break down
- c. mineral fraction (n) - extent / size
- d. interaction (n) - clean
- e. decay (v) - keep
- f. measure (n) - small piece
- g. organic matter (n) - act to each other
- h. particle (n) - mineral component

2. Grouping. Which group do the following words belong to?

Potato; tomato; pineapple; papaya; longan; wheat; soya; rubber; cacao; rice; cucumber; carrot; lemon; bean; peach; cotton; pear; tea; manioc; orange; coffee; sugar cane; peanut; strawberry; cauliflower; cabbage; banana; water melon . . .

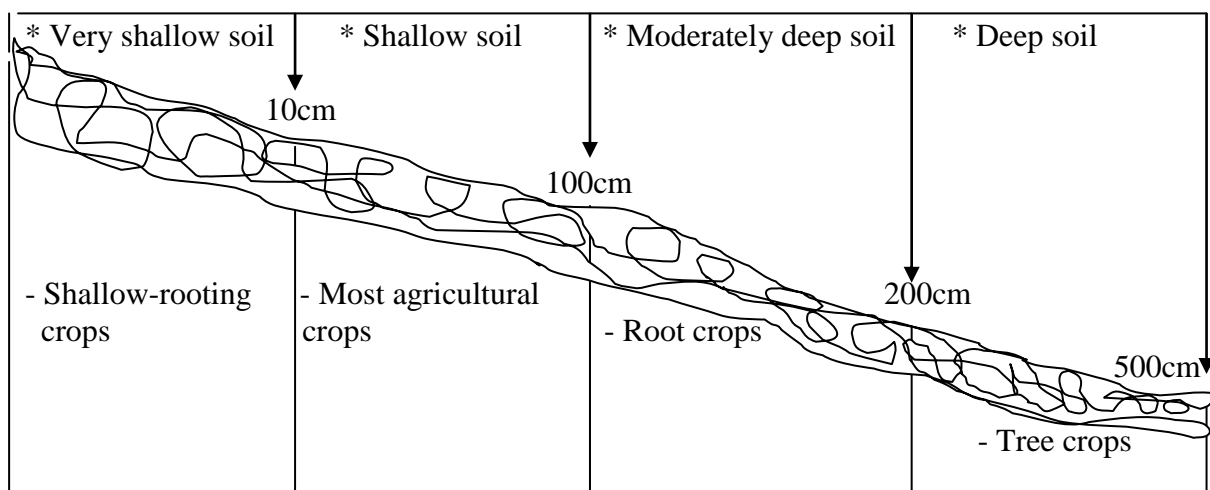
| Fruit trees | Vegetables | Industrial crops | Food crops |
|-------------|------------|------------------|------------|
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |
| - | - | - | - |

| | | |
|--------------------------|---------------|---------------|
| a. Shallow-rooting crops | b. Root crops | c. Tree crops |
| | | |
| | | |
| | | |
| | | |

II. Skill development

1. Look at the diagram and answer the questions below.

A. Soil profiles.



a. Exercise 1.(pair-work) Now ask and say about other soil-type of the soil profile as example.

- A: What is the depth of a shallow soil?
- B: A shallow soil has a depth of 10 to 100 cm.
- A: What crops is a shallow soil suitable for?
- B: For shallow rooting crops.

A: What are shallow rooting crops composed?

B: Banana; pineapple,... (give examples in your own area.)

B. Soil particle size.

| Types of soil | Particle diameter range in mm |
|---------------|-------------------------------|
| - coarse sand | 1.0 - 0.2 |
| - fine sand | 0.2 - 0.05 |
| - silt | 0.05 - 0.002 |
| - clay | < 0.002 |

Small soil particles are called sand, silt or clay particles, according to their size.

a. *Speaking.* (pair-work) Ask and answer about the following soil particles.

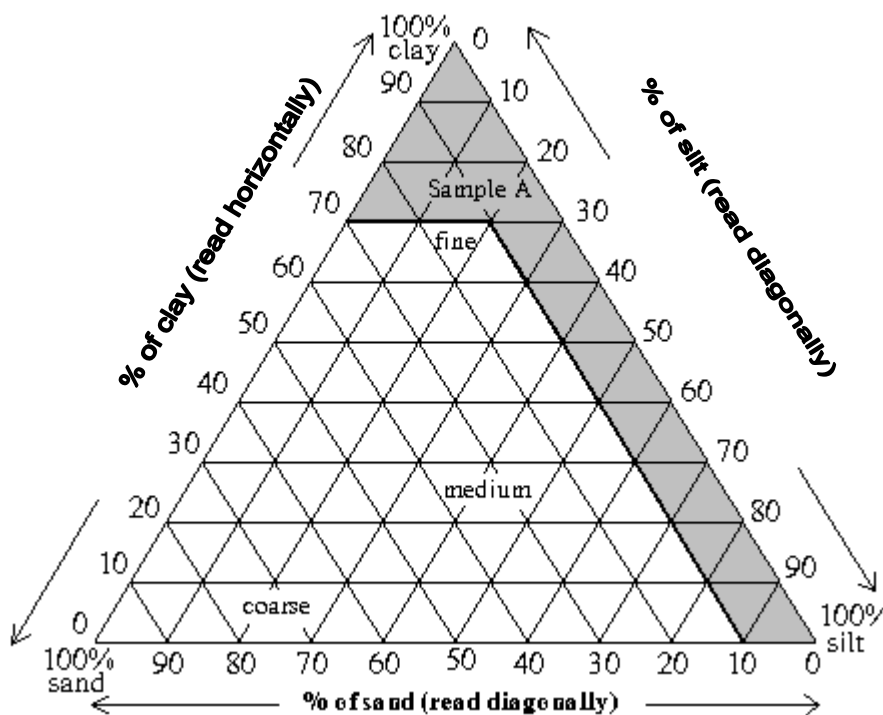
Example

- Coarse sand
 - Fine sand
 - Silt
 - Clay
- A: What is the diameter range of coarse sand particles?
 B: Coarse sand particles are between 2 and 0.2mm in diameter.
 A:
 B:
 A:
 B:

C. Soil texture and structure.

Soil texture is the proportion of different particle sizes in the soil. Soil with very small particles (clay) has a fine texture. Soil with a mixture of small and large particles (loam) has a medium texture. Soil with large particles (sand) has a coarse texture. The range of textures can be shown on a soil texture diagram. For example, soil sample A has 10% sand, 20% silt and 70% clay. It falls at point A on the diagram. What is the soil texture of soil sample A?

1. Look at soil sample A:



Soil sample A has 10% sand, 20% silt and 70% clay. Thus it has a ...fine... texture.

Now look at the following soil samples in the table.

a. Fill in the blanks. What is the texture of the following soil samples?

| Samples | Sand | Silt | Clay |
|---------|------|------|------|
| B | 60% | 30% | 10% |
| C | 30% | 50% | 20% |
| D | 40% | 30% | 30% |

2. Read and complete the following passage.

Soil with a coarse texture consists of relatively large particles. Thus it retains air in the spaces between the particles, but it does not retain water. Coarse-textured soils are usually well drained. However, many important nutrients are leached out of the soil. These soils are usually red or brown in colour.

A medium-textured soil consists of a mixture of ... (1) ... and ... (2) ... particles. ... (3) ... it retains ... (4) ... and ... (5) (6) (7) ... are usually imperfectly drained. Therefore important plant ... (8) ... are available for plant growth. These soils are usually ... (9) ... or ... (10) ... with grey mottles.

A fine-textured soil consists of relatively ... (11) (12) ... Thus it ... (13) ... water, ... (14) ... it does not hold ... (15) Fine-textured soils are blue or green in ... (16) They are ... (17) (18) ... drained.

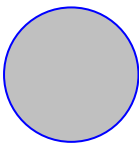
The words may be used to fill the gaps.

thus ; water ; small ; soils ; large ; medium-textured ; brown ; nutrients
red ; particles ; holds ; small ; air ; but ; poorly ; colour ; usually ; nutrients

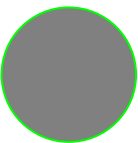
3. Answer the following question.

- Why does a coarse-textured soil retain air?
- Give one disadvantage of a coarse-textured soil.
- Why is a medium-textured soil usually imperfectly drained?
- Are the particles of a fine-textured soil predominantly sand, silt or clay?
- Why is the fine-textured soil often flooded after rain?
- Why is rice often grown in a fine-textured soil?
- In which type of soil are root crops (e.g. sweet potato, cassava, etc) grown in your area? Give one reason why you think this is so.

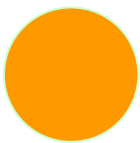
D. Soil structure. Define the soil texture as quickly as possible, then write the soil structure.

- Soil texture: A: B: C:
- 

- sand 80%
- silt 10%
- clay 10%



- sand 20%
- silt 70%
- clay 10%



- sand 20%
- silt 20%
- clay 60%
- Soil structure: A: B: C:

1. Read and complete.

Sample A is a coarse-textured soil, sample B is a medium-textured soil and sample C is a fine-textured soil. Each sample is mixed with water and shaped like a ball. What happens when water drips onto each sample?

- The coarse-textured soil breaks up easily. It has a loose structure.
- The medium-textured soil moderately easily, friable structure.
- The does not solid structure.

2. Speaking. (pair-work) Answer the following questions.

- Why is it difficult to cultivate a fine-texture soil?

- b. Why is a medium-textured soil suitable for plant growth?
- c. What happens to coarse-textured soil in a heavy rain storm?
- d. What are the advantages of each type of soil?
- e. What are the disadvantages of each type of soil?
- f. How can farmers cultivate a coarse-textured soil?
- g. How can a fine-textured soil be used most efficiently?

III. READING A

1. Pre-reading task.

- a. Find the difference between soil, land and earth.

SOILS

Soils are very complex natural formations which make up the surface of the earth. They provide a suitable environment in which plants may obtain water, nutrients and oxygen for root respiration, and firm anchorage. Soils are formed by the weathering of rocks, followed by the growth and decay of plants, animals, and soils micro-organisms. If a farmer is to provide the best possible conditions for crop growth, it is desirable that he should understand what soils are, how they were formed and how they should be managed.

The topsoil and surface soil is a layer about 8-45 cm deep which may be taken as the greatest depth which a farmer would plough or cultivate and in which most of the plant roots are found.

Loose, cultivated, topsoil is sometimes called mould.

The subsoil, which lies underneath, is an intermediate stage in the formation of soil from the rock below.

A soil profile is a section taken through the soil down to the parent rock. In some cases this may consist of only a shallow surface soil 10-15 cm on top of a rock such as chalk and limestone. In other well-developed soils (about a metre deep) there are usually three or more definite layers (or horizons) which vary in colour, texture and structure.

The soil profile can be examined by digging a trench or by taking out cores of soil from various depths with a soil auger.

A careful examination of the layers (horizons) can be useful in forming an opinion as to how the soil was formed, its natural drainage and how it might be farmed. Some detailed soil classifications are based on soil profile.

II. Check your understanding.

A. Read the text carefully, then answer the following questions:

1. What are the four main constituent parts of soil?
2. What should the farmer understand about soil?
3. How many types of soil are there?
4. What soil is called mould?
5. How are soils formed?
6. How do you take a soil sample?
7. What can a soil sample tell you?

B. Find the words with opposite meaning to the following words in the passage.

- | | | |
|----------------|-----------------|-------------------|
| - simple : | - development : | - concentrating : |
| - loose : | - deep : | - single : |
| - not wanted : | - wash away : | - general : |

C. Look at paragraph 2 and say what these words refer to:

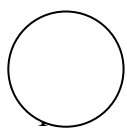
- line 1: which line 9:
- line 2: which line 13:
- line 8: which line 17:

D. Look at the passage again. Which words correspond to the definitions below:

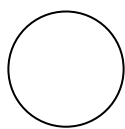
1. how particles are arranged in a substance
2. the process of pressing particles closely together
3. a ditch dug in the ground
4. the middle, or most important, part of anything
5. a system for taking away water
6. a group into which something is put
7. what is based on to classify soil in full detail
8. loose cultivated surface soil.
9. small organisms living in soil.
10. prepare and use land for growing crops

E. Matching the given words with each picture from smallest particle to largest.

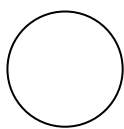
- A. gravel. B. clay. C. sand. E. stone. F. silt. G. rock.



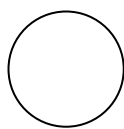
1.



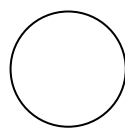
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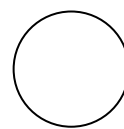
3.



4.



5.



6.

PART B:

I. READING B

AGRICULTURAL POLICY

Agricultural policy in the United Kingdom since 1973 has been determined primarily by Common Agricultural Policy (CAP) of the EU, which aims to ensure stable markets, a fair standard of living for producers, and regular supplies of food at reasonable prices for consumers. The costs to EU taxpayers of the CAP, which accounts for more than 50 per cent of the EU's budget, and the mechanisms of maintaining farm prices through grants and subsidies, and through tariffs on cheaper imports, have come under increasing criticism since the early 1980s by Britain, by developing countries, and by the United States.

Various reforms have been implemented in an attempt to reduce costs, subsidies, and the huge levels of overproduction, which generated "butter mountain" and "wine lakes" during the 1970s and 1980s. These have included schemes to encourage farmers to take land out of agricultural production, to adopt more environmentally kind, but less productive methods of farming, to impose production quotas on certain products, like milk, and to reduce subsidies on others.

In Britain agricultural marketing is carried out by private traders, producers' cooperatives, and marketing boards for certain products. The number of marketing boards has been steadily reduced over the past 20 years. In November 1994 one of the largest, the Milk Marketing Board for England and Wales, ceased to exist and was replaced by a producers' cooperative, Milk Marque.

Britain's food industry is one of the world's largest and most successful, with a highly developed retail, supply, and distribution network. Its supermarket chains supply an ever-increasing choice of food products to the British consumer and are among Europe's most profitable companies. The 1997 merger of Guinness and Grand Metropolitan created one of the world's biggest food and drinks conglomerates.

II. Word study.

A. Find the words in the text which have similar meaning to the following words.

- | | | | |
|----------------|---------|--------------|---------|
| 1. define : | a. | 6. suitable: | f. |
| 2. firm: | b. | 7. fund: | g. |
| 3. norm: | c. | 8. project: | h. |
| 4. collective: | d. | 9. provide: | i. |

5. usual: e. 10. systems: j.

III. Grammar. Word Formation

A. *Practice.* New words are formed by adding a suffix to other words.

Find the words formed in this way in the passage to complete the exercise below.

| | | |
|-------------------------|------------------------|-----------------------|
| 1. produce → production | 2. employ → employment | 3. produce → producer |
| - contribute → | - require → | - → |
| - compact → | - manage → | - → |
| - examine → | - → | - → |
| - → | - → | - → |
| - → | - → | - → |

| | | |
|------------------------|-------------------------|-------------------------------|
| 4. reason → reasonable | 5. product → productive | 6. agriculture → agricultural |
| - desire → | - → | - → |
| - suit → | - → | - → |

B. *Complete the following sentences, using the right form of the given word.*

- The government gives some subsidies to the basic food to.....the normal production. (*maintenance*)
- Five dollars for a big chicken is.....enough in New York. (*reason*)
- There should be a complete.....of all the local authorities. (*implement*)
- British Agriculture.....just 2% of the population and1.9% of GDP but it achieves high levels of efficiency and..... . (*employment ; contribution ; produce*)
- Will the new power station be able to supply us cheap energy.....? (*require*)
- Agricultural policy aims to ensure stable markets, a fair standard of living for, and regular supplies of food at.....prices for consumers. (*produce ; reason*)
- Various reforms have been.....in an attempt to reduce costs, subsidies, and the huge levels of (*implementation ; overproduce*)
- In Britain agricultural marketing is carried out by private traders, producers', and marketing boards for certain..... . (*cooperate; produce*)

IV. Comprehension check.

- What are the main points of the policy?
- What is the aim of the policy?
- Who gets the most benefits from the policy?
- Are there any agricultural policies in your country?
- Do the policies help to develop the agriculture?
- What is the agriculture of your country?
- What is the most dominant sector in the agriculture?
- Where is rice mainly grown?
- What population does the agriculture employ?
- What percentage of GDP does the agriculture account for?
- What do you think about your agriculture now and in the future?
- Are there any plans for developing your agriculture?
- According to you can we develop our livestock rising like Holland or USA?
- As a future agronomist do you have any special plans for the agriculture?
- What economic sector can be developed best in our agriculture?



Never put off till tomorrow what you can do today

§ UNIT 2 TROPICAL SOILS

I. Word study

1. Fill in the gaps with given words.

due to ; erode ; waterlogged ; compound ; presence ; friable ; laterite ; penetrate

- a. Metals areby acids.
- b. Common salt is aof sodium and chlorine.
- c. The train was delayedthe bad weather.
- d. The dogs were trained to detect theof drug.
- e. Soil with large particles is.....
- f. Almost roads in the countryside are made of
- g. The heavy rain had right through her coat.
- h. The area is often in rainy season.

II. READING A.

1. Pre-reading task.

- a. What countries are tropical?

2. Read the passage and answer these questions as quickly as possible.

- a. What colour is laterite?
- b. What are the three major soil types mentioned in the passage?

TROPICAL SOIL

The soil of hot, tropical areas varies in texture, structure and colour and in their value for agriculture. A group called Tropical Red Earths is a very common soil type in, for example, tropical Africa. The group includes yellow, orange and brown soils as well as red. Their colour is due to the presence of certain minerals, mainly iron and aluminium oxides. They are usually rich in clay but they are quite friable and easily cultivated. A common type of soil in this group is laterite. It is a red-brown soil, which becomes very hard when it is dry. Laterite often forms a very hard crust on or below the surface. Plants are unable to grow through it and water cannot penetrate it. These soils are usually eroded by water running over the surface.

Black or dark-coloured soils are found in lowland areas, which become flooded or waterlogged, and in valleys. They are usually rich soils and valuable for cultivation (rice). The grey and light-coloured soils contain calcium compounds and are often found over limestone rock.

A. Say whether the information in the following sentences is true or false. Correct any false or partly false information.

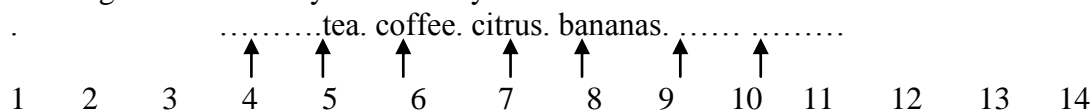
1. There is only one type of soil in tropical countries.
2. Soils which are rich in iron oxides are common in tropical Africa.
3. These soils are fine-textured and usually solid in structure.
4. Laterite is an example of Tropical Red Earths.
5. Laterite has properties which make it difficult for plants to grow.
6. Laterite is a well-drained soil.
7. Important nutrients are leached out of laterite soils.
8. Black or dark-coloured soils are poorly drained.
9. Black or dark-coloured soils usually have large soil particles.
10. Black or dark-coloured soils retain important plant nutrients.

B. Writing and speaking. Answer the following questions

1. Can you say anything about the pH value of Tropical Red Earths from the information given in the passage?
2. Find out about the properties of soils in your area. (type of soil, colour, texture and structure of the soil). Which crops grow on them?

C. The pH value of soil water.

We use the pH scale to describe the acidity or alkalinity of a soil. A soil with a pH value between 1 and 6 is acid, whereas a soil with a pH value of 7 is neutral and a soil with a pH value between 8 and 14 is alkaline. Most soils have a pH value between 8 and 6. Most crops do not grow well in very acid or very alkaline soils.



1. *Writing 1. Now make similar sentences about tea, coffee, citrus crops, rice, tomato and sweet potatoes as the given example.*

Example: Bananas grow well in slightly acid or neutral soil, but they do not grow well in very acid soil.

- a. Tea.....
- b. Coffee.....
- c. Citrus.....
- d.
- e.

2. *Writing 2. Write comparison*

Example: blackberry/cherry. Blackberry grows well in acid soil, but carrot doesn't.

- a. grape/cauliflower
- b. soybean/celery
- c. onion/peanut
- d.
- e.
- f.

Acid and Alkaline Tolerance

| <i>Quite acid (4.0 – 6.0)</i> | <i>Slightly acid (6.0 – 7.0)</i> | <i>Neutral to alkaline (7.0 – 7.5)</i> |
|-------------------------------|----------------------------------|--|
| - blackberry | - apple | - alfalfa |
| - blueberry | - apricot | - beet |
| - bracken | - beans | - broccoli |
| - chestnut | - buckwheat | - cabbage |
| - coffee | - cherry | - carrot |
| - conifer | - egg-plant | - cauliflower |
| - lupine | - gooseberry | - celery |
| - marigold | - grains | - clover |
| - moss | - grape | - cucumber |
| - oak | - parsley | - leeks |
| - potato | - pea | - lettuce |
| - peanut | - peach | - onion |
| - raspberry | - pear | - silver beet |
| - sweet potato | - pumpkin | - spinach |
| - tea | - soybean | - swiss chard |
| - watermelon | - strawberry tomato | - zucchini |

Acid and alkaline tolerances of selected crops.

3. *Exercise 3. (pair-work)*

Ask and say about the tolerance of the crops in the box as example below.

- A: What crops grow well in an acid soil?
- B: Blackberry, potato and watermelon grow well in acid soil.
- A: What crops do not grow well in an acid soil?