

WEEKLY HOME STUDY PACKAGE - WEEK 5 02/08/21 – 06/08/21)

Subject	AGRICULTURAL SCIENCE	Year/Level	11
Strand	AS 11.3 Agronomy		
Sub-strand	AS 11.3.1 Soils		
Content Learning Outcome	Demonstrate the assessment methods used in determining the physical properties of the soil.		

SOIL STRUCTURE: Describing soil structure

Soil structure is studied in the field under natural conditions and is described under three categories:

Soil structure	Description	Location
SINGLE GRAINED	Soil is broken into individual particles which do not stick together	Commonly found in sandy soil
GRANULAR	Resembles cookie crumbs usually less than 0.5cm in diameter	Commonly found on surface horizons with high organic matter content

2. Class - describes the size of the individual peds. Soil is differentiated into 5 size classes depending upon the size of the individual peds

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|---------------------------|---------------------|------------------------------|
| i. Very fine or very thin | iii. Fine or thin | |
| ii. Medium | iv. Coarse or thick | v. Very Coarse or very thick |

The terms thin and thick are used for platy types, while the terms fine and coarse are used for other structural types.

3. Grade –indicates the degree of distinctness of the individual peds.

- It is determined by the stability of the aggregates.
- influenced by the moisture content of the soil.
- also depends on organic matter and texture
- Four terms commonly used to describe the grade of soil structure are:
 - a. Structureless: There is no noticeable aggregation, such as conditions exhibited by loose sand.
 - b. Weak Structure: Poorly formed, indistinct formation of peds, which are not durable and unaggregated material.
 - c. Moderate structure: Moderately well-developed peds, which are fairly durable and distinct.
 - d. Strong structure: Very well formed peds, which are quite durable and distinct.

Activity

- a. Describe a soil which has a single grained structure. (2 marks)
- b. Soil structure is studied in the field under natural conditions. Differentiate between the type and class of describing soil structure. (2 marks)
- c. State three features that indicates the degree of distinctness of the individual peds. (3 marks)