



ASSESSMENT

Department of Agrotechnology

Faculty of Agriculture

University of Islam Malang

Subject : Soil Fertility and Health
Credits : 3 credits/ 5.1 ECTS
Subject Code : MKW 60621
Semester : 4
Parallel Class : A, B

Appendix 1. Scoring Matrix

Nomenclature	Weight	Final Score	
		Letter Mark	Score average
Assignment	20%	A	80 – 100
Presentation and discussion	10%	B	70 - <80
Midle semester test	20%	C	55 - <70
Final semester test	20%	D	50 - < 55
Practice	20%	E	0 - <50
Presence	10%		

Appendix 2. Question samples

1. To overcome the problem of soil acidity can be done by liming. If a clay soil with CEC = 30 meq/100 g and initial soil pH = 5.5 (Base Saturation = 60%). The soil will be raised to pH = 6.5 (Base Saturation = 80%). Calculate the need for lime (CaCO₃) per hectare? (Molecular Weight of CaCO₃ = 100) (to echieve CLO 1)
2. a. Nitrogen is a mobile nutrient in the soil. Nitrogen loss often occurs in some agricultural lands. What is the N management strategy in paddy fields?
b. Some soil types in agricultural land have high P fixation capacity. This condition will reduce the availability of phosphorus in the soil. What is the P management strategy, especially in soils with high P fixation capacity?
c. In the rainy season the availability of potassium decreases. How to solve the problem of availability of K in the soil in the rainy season?
(to echieve CLO 2)
3. Conventional soil management for food crop cultivation has an impact on decreasing soil organic matter content. Explain how the strategy for managing organic matter on agricultural land is to maintain soil fertility and quality (to echieve CLO 3)
4. a. Explain several ways to evaluate soil fertility and how to interpret based on the results of soil fertility evaluation.
b. The results of the soil quality assessment based on the minimum data set method and the scoring function showed that the land use of maize and horticultural land had a lower soil quality index than that of citrus plantations. Explain why this happened and how to improve soil quality in maize and horticulture fields? (to echieve CLO 4)

Appendix 3. Achievement of CLO

A Class

Meetings	CLO 1 (%)	CLO 2 (%)	CLO 3 (%)	CLO 4 (%)
1-3	87			
4-5	83			
6		80		
7		75		
8		85		
9		80		
10			85	
11				87.5
12				92.5
13-14				82.5
Average	85	80	85	87.5
Predicate	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT

B Class

Meetings	CLO 1 (%)	CLO 2 (%)	CLO 3 (%)	CLO 4 (%)
1-3	92.5			
4-5	87.5			
6		85		
7		85		
8		90		
9		90		
10			87.5	
11				85
12				87.5
13-14				82.5
Average	90	87.5	87.5	85
Predicate	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT

Standard

Std num-based AI		Weighted avg LO based AI	
70 <= AI	HIGH	70 <= AI	EXCELLENT
60 <= AI < 70	MEDIUM	60 <= AI < 70	SATISFACTORY
50 <= AI < 60	LOW	50 <= AI < 60	DEVELOPING
AI < 50	VERY LOW	AI < 50	UNSATISFACTORY

