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| Title | **Ensure soil conversation and its sustainability** | | |
| Level | **3** | **Credits** | **25** |

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| Purpose | This competency standard identifies the competencies required to perform conservation of soil and its sustainability. Trainee will be able to enhance and manage soil fertility through application of balanced fertilizers. It will also enhance the capacity and knowledge to perform the crop rotation and reclaim/ improve problematic soil and irrigation water. |

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| Classification ISCED | 0811 Crop and livestock production |

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| Available grade | Competent / Not yet competent |

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| Modification history | N/A |

| **Competency Unit** | **Performance Criteria** | **Knowledge and Understanding** |
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| **E1 –** Manage soil fertility analysis | *Trainee must be able to:*  P1. Collect proper soil samples for soil analysis as per standard procedures  P2. Arrange soil analysis from relevant laboratory | * *Trainee must know and understand*   K1. Sample techniques and tagging  K2. Sample size  K4. Analysis facility  K5. Parameters or attributes of analysis report e.g.   * Soil types * Soil pH * Organic matter * Available and non- available plant nutrients * Macro and micro-nutrients * Electrical conductivity |
| **E2.** Apply balanced fertilizer (Organic and inorganic) | *Trainee must be able to*  P1. Select required fertilizer as per soil analysis to enhance fertility  P2. Apply fertilizer as per crop requirement  P3. Apply available manures and compost to sustain soil fertility | *Trainee must know and understand:*  K1. Different sources and forms of fertilizers  K2. Importance of micronutrients  K3. Per acre dose of fertilizer for different crops  K4. Proper time of application of fertilizer  K5. Methods of fertilizer/ manures application |
| **E3.** Schedule crop rotation | *Trainee must* be able to:  P1. Prepare crop rotation scheme to sustain the fertility  P2. Supervise cultivation of crop as per cropping calendar | *Trainee must* know and understand:  K1. Importance of crop rotation  K2. Restorative and exhaustive crops  K3. Cultivation process  K4. Cropping calendar |
| E4. Ensure reclamation of soil and water | *Trainee must* be able to:  P1. identify the soil and water issues to improve the soil status  P2. Apply the amendments to solve soil and water problems as per recommendations | *Trainee must* know and understand:  K1. Categories of soil and water problems  K2. Accurate amendments like gypsum and sulphuric acid |