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| Title | **Carry out fertilizer management as per soil condition** |
| Level | **3** | **Credits** | **8** |

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| Purpose | These competency standards will ensure that the trainee will be able to select and apply suitable fertilizers at right time and at required level |

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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 |

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| **Competency Unit** | **Competency Unit** | **Knowledge & Understanding** |
| **D-1**: Determine the soil suitability for growing chillies | **Trainee will be able to:****P1.**Use suitable equipment for soil sampling **P2.**Draw the representative soil samples **P3.**Perform randomized sampling of soil**P4.**Label the soil sample with all required informatione.g. date of sampling, sampler name and initials etc**P5.**Select the suitable and reliable laboratory for soil testing**P6.**Get soil tested from a laboratory**P7.** Determine the soil fertility by examining the soil test report**P8.** Recognize typical soil types for determining the suitability for chilli production | **Trainee will be able to describe and explain:****K1.** Type of soils and their suitability for chilli production**K2.** Knowledge about drawing the soil samples**K3.** Storage of soil samples to conserve moisture and other factors**K4.** Importance of randomized soil sampling**K5.** Equipment requirement and their utility for sampling **K6.** Basic soil requirements for production of chillies **K7.** Important components of a soil analysis report**K8.** Interpretation of soil analysis report |
| **D-2:** Select and apply suitable fertilizers on the | **Trainee will be able to:****P1.**Select appropriate fertilizers for the soil on the basis of soil and crop requirement | **Trainee will be able to describe and explain: K1.**Knowing the different properties of soil |

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| basis of soil composition | **P2.**Obtain selected fertilizers from certified/ reliable dealers**P3.**Apply the required dosage of fertilizer using appropriate procedures**P4.**Identify the optimum timings of fertilizer application for best results**P5.**Calculate the fertilizer dosage**P6.**Determine the mode of action of selected fertilizer**P7.** Interpret the soil test report | **K2.**Soil deficiencies and their management**K3.** Interpretation of soil testing reports to determine soil fertility**K4.**Importance of fertilizers**K5.** Role of fertilizers in crop production**K6.** Types of fertilizers and their utility**K7.** Calculating the fertilizer dose requirement in the light of soil analysis report**K8.** Method of applying fertilizer at the time of soil preparation**K9.** Reasons to apply fertilizers**K10.** Proper timing of fertilizers application**K11.** Impact of timings of fertilizer application timings on crop productivity**K12**. Impact of fertilizer dose on crop productivity |
| **D-3:** Use organic fertilizers and fertilizer supplements | **Trainee will be able to:****P1.** Select appropriate organic fertilizers such as cattle manure, cereal and legume stovers and wood land litter on the basis of soil and crop requirement, cost and availability etc.**P2.** Compost the organic fertilizer by utilizing various materials such as straw, tree leaves, farmyard manure etc. | **Trainee will be able to describe and explain: K1.**Importance of organic fertilizers**K2.**Difference between organic and chemical fertilizers**K3.**Proper application of organic fertilizers**K4.**Difference between nutrients and minerals |

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|  | **P3.** Use of organic fertilizer as per requirement by adopting appropriate procedures like broad casting, banding and spot application (or side- dressing)**P4.** Apply nutrients /minerals for supplementing fertilizers**P5.** Use organic fertilizer at proper time**P6.** Calculate the ratio of different nutrients for fertilizer supplementation | **K5.**Type of nutrients and minerals essential for soil**K6.**Importance of nutrients and minerals in improving the soil fertility**K7.**Procedures to apply nutrients and minerals.**K8.**Determination the soil requirements of nutrients and minerals**K9.** Importance of application of organic fertilizer at proper timing**K10.** Impact of fertilizer supplementation |