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Unit 14B
The Circular Economy in the Agriculture Sector
Carbon Capture and Sequestration in Agriculture

1 Introduction

Unit 14B provides resources for vocational trainers seeking to incorporate the circular economy into their courses in the Agriculture sector, focusing on the role of regenerative farming and carbon farming to encourage carbon capture and sequestration. This unit explores the importance of agricultural land in the mitigation of climate change and the opportunity it holds to act as a carbon sink. The unit looks at how farms can take advantage of regenerative practices to improve soil health, efficiency, reduce costs and, importantly, avoid desertification and the loss of carbon sinks.

2 Learning Outcomes

Knowledge	Understand the process and techniques for carbon capture and sequestration in agriculture
Skills	Identify practices that can be applied across the farming sector to encourage carbon capture and sequestration
Competencies	Apply circular economy principles for the agricultural sector that encourage carbon capture and sequestration on agriculture land
EQF Level	This material is mainly suitable for EQF Level 4

3 Lesson Plan

Method	Description	Suggested duration in minutes (total minutes)
Brainstorming session	Brainstorming where you as a trainer write down definitions, notions and connotations ought to be used for future discussions and references. You can continue the brainstorming session with the following questions if needed: ● Discuss how a farm/landowners can use carbon farming as a business opportunity, and the	15

	importance of adopting regenerative practices for the long-term.	
Presentation by trainer using PPT	Overview	30
	Unit Learning Objectives	
	Introduction	
	Carbon capture and Carbon sinks	
	The EU Carbon Farming Initiative	
	Benefits of carbon farming for the climate	
	Regenerative agriculture	
	Methods of regenerative agriculture	
	Regenerative annual cropping	
	Case Study – Wexcombe Farm	
	Case Study – Regenerative farming in Spain	
	The AGROFORWARD Project	
	Tree intercropping	
	Environmental benefits	
	Case Study – Intercropping Olive Orchards in Italy	
	Environmental importance of carbon storage in soils	
	Economic importance of carbon storage in soils	
	Case Study – Crop systems, Lauragais, France	
	Discussion	
Assessment	Quiz	15

4 Quiz

1. **The Agricultural sector is both a source of emissions and acts as a carbon sink. Currently, the agricultural sector produces ___% of emissions worldwide.**

   Answer: 24%

2. **Which of these is not a practice of regenerative agriculture?**

   Answer: Tilling

3. **Project Regeneration describes 5 main principles for regenerative agriculture, which of the following is not a principle?**

   Answer: Introducing technologies for precision farming