**RATU NAVULA COLLEGE**

**YEAR 10 NOTES AND ACTIVITY 2021 – WEEK 2**

**AGRICULTURAL SCIENCE**

**Lesson 29:** Contour Farming

**Learning Outcome** : Explain how contour farming control erosion

Contour – across the slope

* contour farming is cultivating, planting **across** the slope

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**How contour farming control erosion**

* keeps valuable topsoil in place
* slow water flow down the slope
* improve irrigation and conserve water

**Where is contour farming used?**

**•**  On sloping fields where crops are grown

* On sloping fields with vegetable beds

What crops can be grown?

• Sugarcane

* Pineapple
* Vegetables

**STUDENT ACTIVITY**

1. How are pineapples planted on slopes, why?
2. How are vertiver grass planted on the slopes, why?

**Lesson 30**: Terrace Farming

**Learning Outcome**: Explain how terracing controls erosion

Terrace: cutting slopes into steps

* terracing is the cutting of steep slopes into step like structure



**How terracing controls erosion**

* slows down the speed of water on steep slopes( water stops on level plains instead of flowing down directly)
* planting can be done on the level areas which will hold the soil particles

**Why use terrace farming?**

* Lowers or prevent the rapid surface runoff.
* Water stops on the level plain where the force of run-off slows down .

**Where is terrace farming practiced?**

 On very steep slopes to plant crops.

 When flood irrigation is to be used on slopes

**What crops can be grown on terraces?**

 Dalo (Fiji)

 Rice (Asian countries)

 Vegetables

 Sugarcane

**STUDENT ACTIVITY**

1. How is it possible to plant rice on a slope land? Can it be irrigated?
2. What are the advantages of practicing terrace farming?

**Lesson 31**: Minimum Tillage

**Learning Outcome**: Explain the importance of minimum tillage in soil conservation

What is minimum tillage?

* it is a way of growing crops with minimum disturbance to the soil. Also known as zero tillage.
* Slashing or chemicals are used to control weeds
* **Zero (minimum) tillage or direct drilling** is a way of growing crops with minimum disturbance to the soil.

**How minimum tillage minimizes erosion**

* Protect soil from degradation(through stubble retention)
* High level of organic matter/biological activity
* Increase water infiltration
* Increase recycling of minerals in soil

**What crops can be grown under minimum tillage?**

* All vegetables
* Most crops (maize, rice, pulses)

**Where is minimum tillage practiced?**

* Pulses -cowpea or Urdi can be planted in the stubble of rice.
* Maize seeds can be spot planted after a legume.

**Student activity**

1. How can you grow pasture grass without cultivating the land.

**Soil Conservation : Activity**

Briefly explain how the following soil conservation methods control soil erosion:

1. Terracing
2. Mulching
3. Cover cropping
4. Name some crops that can be used in contour farming.
5. Practice mulching in your home garden.