

PENANG SANGAM HIGH SCHOOL
P.O.BOX 44, RAKIRAKI
LESSON NOTES

School: Penang Sangam High School

Year/Level: 13C

Subject: Geography

Strand	Physical Geography
Sub Strand	Soil
Content Learning Outcome	Highlight soil conservation measures Describe the impact of climate change on soil

Week:11

vi. Woody crop plantations

- Woody crop plantations are larger areas of trees or shrubs often planted in block.



Advantages

- a. Plantations of woody crops increase income and biological diversity, especially helping solve the problems of animal wastes and filtering irrigation runoff (recycled from ditches).
- b. Plantings done can be designed for conditions and needs of a specific piece of land.
- c. This practice could provide a mix of tree-based conservation and production benefits when used as part of a wide farm diversification strategy.

vii. Green Manures

- are a few different crops that can be grown not to produce or food usage but grown in order to fertilize the farm land on which it grows.



Key farming practises involves cultivating grass in rotation with regular crops to increase the nutrient level in the soils.

Advantages

- a. When the grass is harvested it can be used as fodder for cattle.
- b. For heavily eroded soil it is recommended to grow grass for many years to let the soils naturally repair themselves.

This method can improve the soil structure and suppress the growth of weeds.

viii. **Perimeter Runoff Control**

- This is the practice of planting trees, shrubs and ground cover around the perimeter of your farmland which impedes surface flows and keeps nutrients in the farmed soil.



Advantages

- a. Using grass is a specialised way of handling perimeter runoff that uses surface friction to channel and dissipate runoff.

Crop Rotation

- is a systemic approach to deciding which crop to plant where in your vegetable garden from one year to the next.

For instance, Plant group 1 Onions and Garlic then Plant group 2 Carrots, Parsnips, Parsley, Dill, Fennel, Coriander.

Main reason for this to condition the soil to keep the nutrients and fallow for more sustainable soil management.

ix. **Keyline Plans**

- Typically employs water shortages by the use of ponds as a component of the overall plan to sustain the soil. Small ponds are established to store surplus runoffs and these water could be placed naturally at the intersection, ridge or valley or convex and concave slopes.

- Keyline is invented to enhance contours that collect water and direct it on sloping land without the need for terracing. The water collected by the keylines is directed into dammed ponds and is drip-fed by gravity irrigation for crops and animals.



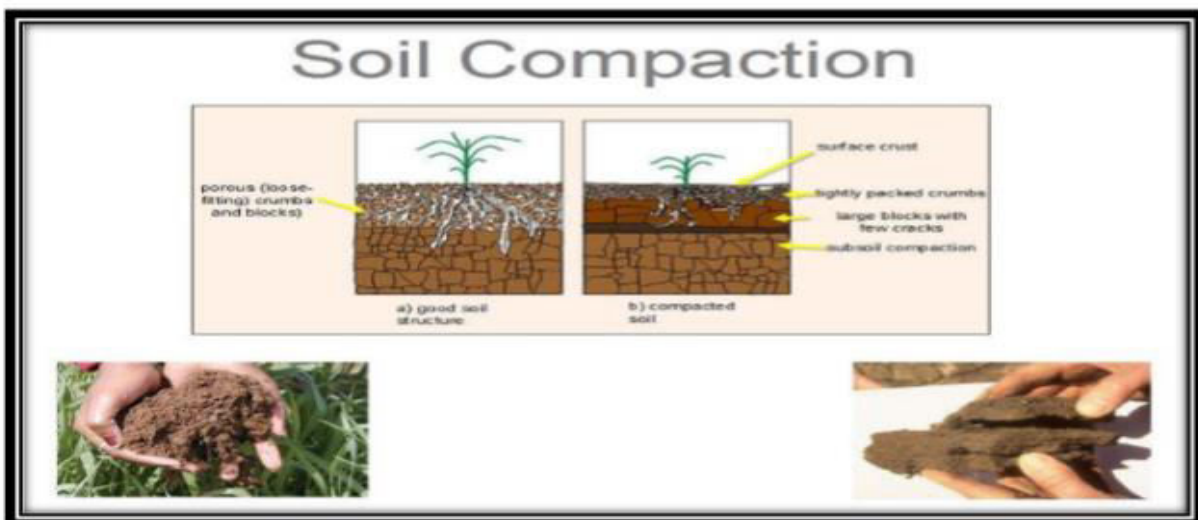
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Advantages

- The keylines are carefully chosen to ensure maximum water collection potential.
- Reduces soil erosion and flooding and gathers nutrients which build up soil fertility over time.

Appendix

An illustration of a good soil structure and the compaction of soil structure.



<http://www.organicsoilsolutions.com/wp-content/uploads/soil-compaction.jpg>