



Mulching to control soil erosion in Dominica

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Country of first practice	Dominica
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Sustainable Development Goals	No poverty, industry, innovation and infrastructure, climate action and life on land

Summary

The objective of mulching is to protect the soil from the impacts of heavy rainfalls, storms, and droughts, while providing complementary benefits, such as the reduction of weed growth and water loss, and the increase of soil moisture, microbial action, organic matter and nutrient content.

This practice helps in the improvement of the resilience of those farmers that adopt it because it helps in the reduction of the impact of extreme weather events on the soil. And also, their livelihoods will benefit: eventually, this practice helps to improve agricultural productivity, thereby contributing to people's food and nutrition security.

Description

Natural hazards, such as storms, hurricanes, and heavy rains, directly impact agricultural productivity and production in Dominica, leading to landslides and soil erosion, among others.

In order to better mitigate the impacts of these hazards and prevent soil erosion, mulching can be used to protect and conserve the soil, and reduce erosion by water and wind. Mulching is a very simple and beneficial practice where organic material, such as crop residues and weeds,

or inorganic material, like plastic sheets, is spread over the soil surface.

1. Implementation

The material used for mulching is often determined by local availability. While inorganic materials limit water losses and reduce soil erosion better than natural mulches, organic mulches are a long-term source of energy and nutrients.

In Dominica, both organic as well as inorganic mulching is extensively used. Plastic mulches are widely used in the production of pineapples and vegetables primarily to prevent or suppress weed growth.

Organic mulching is also extensively practiced in banana, plantain, and other field vegetable production, particularly during the dry season to reduce moisture loss and weed growth, and improve microbial action and organic matter availability. Mulch materials should be checked for relevant pests and diseases to avoid spreading these to new sites.

Furthermore, pests like snails, slugs, and rodents tend to hide under mulch.

Therefore, appropriate pest control strategies, especially related to these types of pests, must be evaluated for

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incorporation into production systems when mulch is used.

Figure 1 and Figure 2 show mulching on a pineapple farm at Layou Valley and a banana farm at Londonderry in Dominica, respectively.

Figure 1. Mulching on a pineapple farm at Layou Valley



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Figure 2. Mulching on a banana farm at Londonderry in Dominica



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2. Further reading

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3. Agro-ecological zones

- Tropics, warm

4. Objectives fulfilled by the project

- Pro-poor technology

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