



# MULCHING

Climate Smart Agriculture (CSA) Brief No. 4 for Agricultural Field Officers



Mulching around a seedling at The Tower Estate, St Paul's, St George

## Did you know?

*Mulching is the best way to conserve moisture in the soil and it also provides protection from top soil erosion. It is especially important to implement this practice before the start of the dry season.*

## Challenges

Decades ago farmers planned and implemented their farming activities and schedule with a sense of assurance that the dry season would end in May, and that the rains would come in June, and fall until December. However **in recent times, the distinction between the wet and dry seasons has reduced**. Some of the specific climate-related events that negatively impacted the agriculture sector in Grenada, Carriacou and Petite Martinique have been:

- ✓ Prolonged and severe dry spells in 2009 and 2010.
- ✓ Extremely heavy rain events which result in flooding, landslides and soil erosion for example in November, 2016 and August, 2018.

**In general, the predictions point to less annual rainfall (leading to droughts) and more heavy rainfall events (leading to flooding).** This can result in loss of crops and livestock. A flooding event occurred in the North Eastern Corridor in 2016 and the calculated damage and loss to farmers surpassed EC\$1,000,000 (Ministry of Agriculture and Lands, 2016).

The above-mentioned events indicate a need to implement soil conservation practices. **One such practice is mulching.** This factsheet outlines the steps to implement mulching that is used to protect top soil and to improve soil fertility.

## Definition of mulching

Mulching is the practice of placing selected mulch material on the beds or around the plants on the farm. A mulch is any material that can be used to cover and protect the top soil from adverse conditions (natural or man-made) in addition, it improves the soil fertility on the farm.

## Types of materials that can be used when mulching

- ✓ Grass: e.g. vetiver (sweet root grass) NB. Use grasses that are not seeding
- ✓ Twigs
- ✓ Crop residue
- ✓ Straw
- ✓ Shredded paper, including newspaper, and card board
- ✓ Shredded wood chips, leaves, compost, bagasse, etc.



Mulching demonstration at the La Sagesse Farm, St David



### Advantages of mulching

- ✓ Mulching enhances the activity of soil organisms such as earthworms.
- ✓ It helps to retain moisture in the soil.
- ✓ It suppresses weed growth.
- ✓ It keeps the soil cool.
- ✓ As the mulch decomposes, it improves soil fertility and the organic content.
- ✓ It prevents erosion hence protecting and reducing the loss of top soil.

### When to mulch

Whilst it is advisable to mulch at any time, it is especially important to practice mulching before the dry season in order to capture the moisture in the soil.

### Steps in mulching

- ✓ Choose mulching materials that are suitable and appropriate to the needs of the farm,
- ✓ Secure/ collect the mulch,
- ✓ Prepare the area: remove all weeds, weed seeds, stones or sticks, etc.
- ✓ Carry the material to where it has to be used,
- ✓ Add a generous thickness (1-2 inches for short crops, and 8-12 inches for tree crops) on the soil over the entire area to be mulched,
- ✓ Spread the mulch with a rake as needed for an even layer,
- ✓ Pull back the mulch from the area when you need to plant something new,
- ✓ When mulching around a plant, you should spread the mulch to the canopy of the plant and not around stem/trunk of the plant.

### Constraints/Limitations of mulching

While the practice of mulching is very good, there are some associated disadvantages:

- ✓ Organic mulch will decompose and have to be replaced, increasing the labour input.
- ✓ Organic mulch sometimes has viable grass seeds, if these seeds germinate and they are not managed, they can create additional labour needs. *Keep in mind that "One year's seed equals seven years weed".*



Mulching demonstration at the La Sagesse Farm, St David

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