

Stewarding the Soil and Rain

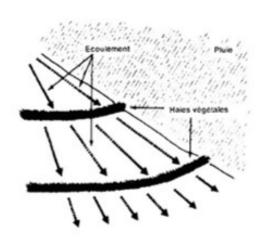
In Haiti, where the land once produced bountiful harvests in generations past, most farmers say the same thing, "Our soil is sick!" They talk about abundant harvests in their grandparents' time, but now yields are extremely low.

Upon observation and in conversation with farmers, we have determined that soil erosion and loss of soil organic matter are the main causes of soil degradation in Haiti. And the two are connected. As the soil organic matter drops, the soil can no longer infiltrate the rain. The torrential tropical rains easily wash away the soil on the steep hillsides. The eroded fields without the capacity to receive and store water cannot grow very much biomass, so there is less organic matter to build the soil.



Notice the Vetiver rows on the left versus the eroded land on the right. This was all fertile farmland years ago!

Our entry-level teaching program is soil conservation. Our Agri-plus technicians teach three group meetings. These meetings contain a spiritual teaching and an agricultural teaching. In the first lesson, farmers learn about how God created a beautiful earth. How sin has broken our relationship with God, others, creation, and has given us a wrong view of ourselves. They learn how Jesus came to heal these broken relationships, and how as redeemed people, our farming can bring glory to God. In the agricultural part of this lesson, farmers learn about erosion. Surprisingly, people can see erosion all their life and not understand the seriousness of it. This is not limited to Haitians, as many Americans are unconcerned about the seriousness of soil loss through erosion. We look at several methods to stop erosion, but we promote live hedgerow terraces.





An illustration in the lesson showing how to stop erosion.

An illustration in the lesson showing how a Vetiver row holds the soil.



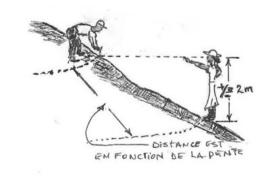
Farmers learning about Vetiver in the group meeting.

In the second lesson, we learn from Genesis 1:28, how we are to have dominion over the earth. But this needs to be done in the context of Genesis 2:15, where God tells us to protect and care for the earth. We then look at the parable in Matthew 25:14-29. Here we learn principles of stewardship. God wants us to utilize what He has given us to take care of our families and bless others. But when we waste our resources, the negative effects are cumulative. In the agriculture part of this lesson, we learn to build an A-frame level and calibrate it. It is very important that hedgerow terraces are planted level on the contour. This way as water flows down the slope it is a dead stop for the water. If the terrace is angled, the water will flow along the top of the hedgerow, washing a gulley.



In the third lesson, we start off with Deuteronomy 8:3b where it says, "...man does not live on bread alone but on every word that comes from the mouth of the Lord." From here we stress the importance of both bread to eat and the Word of God. You can't live without either. And providing bread for our families and the Word of God should be connected. We use George W. Carver's example where he went into his laboratory and said, "Great Creator, please show me why you made the peanut." We need to work with a dependance on God to lead us. We look at 1 Corinthians 10:31, "Therefore, whether you eat or drink, or whatever you do, do all to the glory of God."

Then we look at two biblical principles for farming. #1 - The earth and all that is in it belongs to God, Psalms 24:1, and <math>#2 - God was the first farmer, Genesis 2:8.



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An illustration in the lesson showing how to space the rows.

Learning to space the rows.

For the agricultural part of the third lesson, we learn about Vetiver. We talk about it's characteristics and what makes it a good choice for a hedgerow terrace. It is deep rooted, but does not compete much with surrounding crops. The seed is sterile, so it won't spread out of control.

Then we go out to a field and mark off the contour lines, using a simple technique to show farmers how far apart to space the rows. They learn to run the A-frame level to mark the level contour. And we plant some Vetiver.





Learning to plant Vetiver

After this third training, the technicians schedule with the farmers when they want to plant in their field. The farmers need to collaborate with other farmers so that several are present to plant.



Mature Vetiver hedgerows have stopped erosion!

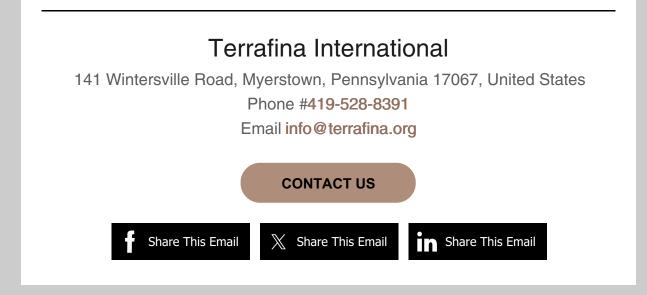


His left leg is straight and his right leg shows how much topsoil has been held back by the row of Vetiver.



We also teach the farmers to cut the Vetiver and use the straw for mulch.

Note: * The lessons described are what we use in the Agri-plus East Haiti Program. The West Program lessons are a little different. Also in the East Program, we loan Vetiver slips to the farmers since there isn't Vetiver in the area. The farmers have to repay the loans and the plant material from repaid loans is used for new farmers. In the West Program, Vetiver is abundant, so the farmers have find Vetiver slips and bring it to their field before the planting.



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