

Experiences with soil and water bioengineering techniques

Palisade

General characteristics

Vertical structure or slightly inclined to retain the ground on embankments. This structure is formed by living poles or stakes which are driven into or buried in the ground, forming an array of stakes with gaps in between equal in width to the diameter of the stakes.



Technical characteristics

It is a very simple and effective system for slope stabilization and to prevent that possible landslides reach the roads or trails. Once the structure has been made, it proceeds to fill it with soil to level it with the upper trunk. It is convenient to do a sowing with seeds of native herbaceous or planting shrubs from the zone. Actually, the technique is useful to increment the power of the soil so that when the structure is degraded, the roots retain the non-stabilized interspaces.

Executive details

With stakes of 8 to 12 cm of diameter fixed vertically at a distance between 1 and 1.5 meters depending on the available vegetal material.

The stakes are connected with each other on one or both sides by a horizontal bar.



Without crossing the stakes it can also be useful in zones with slope. As we increase the front level, and unless it acts a sediment barrier, it is filling and compacting the part from the back.



In some cases, it is a simple structure made to increment the power of the ground and constructed with materials obtained from the clearing of the zone to plant.





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Technique evaluation

It is a simple system that can be realize with material from the area resulting from the forestry activity. It also serves as a closure of areas affected by shortcuts.







(Pictures showed in this document are from interventions carry out by Naturalea)