

Soil mulching

A technically simple solution

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The most technically simple system consists of direct seeding in mulch made out of weeds, crop residue and/or imported straw. Although this technique brings a slightly restoration to soil fertility, it allows to adopt easily the basis of direct seeding while assessing the value of a vegetal cover to control erosion, reduce evaporation, restore biological activity and control weeds.

Preparation



- ▶ Traditional weeding with a hoe or chemical spray on natural vegetation (A mix of Glyphosate and 2,4-D. Quantity to be adjusted to the most aggressive species).
- ▶ Weeds are not burned nor removed from the field, but kept as standing mulch.
- ▶ Supplemented with straw up to 7 t/ha d.m. (6 – 10 cm thick of mulch).



Hill drops are not covered by the mulch

Seeding



Opening hill drops with bamboo stick



Hill seeding directly into mulch



Maize emergence in the mulch

Precautions

- ▶ Seeds are treated (fungicide + insecticide)
- ▶ For cereals or grasses, N fertilisation (20 to 30 kg/ha Urea) is recommended for sowing.

Creating a vegetal cover for the next crop



Relay cropping of a legume, as a cover between rice rows



Legume's growing after harvesting the rice

Advantages

- ▶ Low technical skill required
- ▶ Simple system to use for direct seeding (erosion, weeds, evaporation, biological activity).

Drawbacks

- ▶ Straw, mulch availability
- ▶ Poor improvement of soil structure
- ▶ Requires hill seeding

