



CASE HISTORY DRAINAGE IN AGRICULTURE

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1. DESCRIPTION OF THE JOB

The purpose of the intervention is to drain an area that will be cultivated in the vineyard and subject to frequent flooding after intense rains.

This is a surface-level drainage system at a yard level and the solution adopted is the use of IDROSAC modules 0,3x0,5x2 m

The project includes 4 parallel 96-meter trenches with a hydraulic gradient of 0.004.

2. EXECUTION OF WORKS

The work includes three main phases:

1. Construction of the trench using a mechanical excavator with a 0.40 m bucket
2. Waterproofing of the trench bottom using a waterproof sheath
3. Assembly of the modules
4. Positioning of the drain inside the trench and backfilling.

2.1 Construction of the trench using a mechanical excavator with a 0.40 m bucket



The choice of the 0.40 m bucket is to ensure the maintenance of the ideal section of the modules, which is remembered having dimensions of 0.3x0.5 m, once lowered into the trench (Fig.1).

The excavation depth is maintained at 1.10 m from the countryside level as per the project.

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2.2 Waterproofing of the trench bottom using a waterproof sheath



To guarantee the hydraulic continuity of the drain, an impermeable sheath is applied to the bottom of the excavation, which in this case has been fixed to the walls with nails (Fig.2).

2.3 Assembly of the modules

The 2 m single modules are securely joined together. Two head-to-head and alloy-bound panels are joined with iron wire



After the binding on the four vertices, the joint is covered by a non-woven geotextile band to avoid soil infiltration in the joints.



2.4 Positioning of the drain inside the trench and backfilling

After joining all the modules, the drain is lowered into the trench and positioned properly on the bottom

