ATTACHMENT

A soaking pipe system (most often known as a sweating hose, porous hose, or permeable drip line) is a simple and highly effective irrigation method. It involves the slow, direct delivery of water to the soil along the entire length of the hose, allowing for water savings of up to 70% compared to traditional watering.
Here's a detailed description of how it works, its design, and the advantages and disadvantages of this system: How does it work? The hose is connected to a water source (e.g., a garden tap or water butt) and laid on the ground around the plants. As water enters the hose, pressure causes it to slowly "sweat" through thousands of microscopic pores in the material's structure.

Water is delivered directly to the root zone, eliminating losses due to evaporation or runoff. Construction and materials: Material: Most often made of recycled rubber (e.g., from old car tires) mixed with polyethylene.
This gives it a characteristic, rough and spongy structure. Diameter: Standard hoses have a diameter of approximately 13 mm (1/2 inch) or 16 mm, which makes them compatible with standard garden connectors. Termination: The hose must be blocked at the end with a plug (cap) so that the water does not escape freely, but builds the

appropriate pressure inside the pipe. Direct

comparison: Soaking hose vs. traditional drip line.
Feature: Soaking hose (Soaker Pipe / Soaker Hose)
Classic drip line (Drip Line) Water release method: It seeps through the entire surface of the hose. It flows out point-by-point through built-in drippers.
Installation: Very easy - just lay it out on the ground.
Requires more precise planning for specific plants.
Dosage precision: Lower (more water escapes at the beginning of the hose than at the end). High (often has compensation). Pressure).

Application: Dense flowerbeds, hedges, narrow vegetable patches. Row crops, orchards, plants with wide spacing. Initial cost: Low. Medium / High. Main advantages: High water savings: No evaporation losses, water goes straight to the ground.
Plant protection against diseases: Leaves and stems remain dry, which drastically reduces the risk of fungal diseases (unlike sprinklers).

Aesthetics: The hose can be completely hidden under a layer of bark or mulch, making it invisible in the garden. Low-pressure operation: Works perfectly with gravity systems (e.g., a line connected to a Mauser tank).
Disadvantages and limitations: Limited length: A single line should not be longer than 30 meters.

Above this length, the pressure drops so much that water barely drips from the end of the hose.

Clogging Sensitivity: Microscopic pores can become clogged with hard water scale or soil particles.
A simple strainer is recommended at the beginning of the installation.

Flat terrain requirement: On slopes, water will flow by gravity to the lowest point, causing uneven irrigation.
Installation tips: For best results, it is recommended to cover the hose with a 5 cm layer of mulch (e.g., bark).
This protects the material from UV rays (extends its lifespan) and additionally retains moisture in the soil.
When connecting to the water supply, it is recommended to use a pressure reducer (up to approximately 1 bar), as excessive pressure can rupture the porous structure of the hose.

In summary:
This system works more efficiently and reduces water consumption because the soil acts like a sponge—it slowly soaks into the ground and delivers the right amount to the plants (which is especially important during droughts). Watering with a watering can or hose causes the soil to spread out instead of absorbing water because it's too dry to soak in. To increase the system's efficiency, I added

gutters between the cut vegetable holes to avoid wasting a single drop of water. Furthermore, the

water is only connected when I'm in the garden, and 25 minutes of watering is enough to ensure the vegetables have enough water to grow. 25 minutes of water consumption with this system equates to approximately 5-10 liters of water.