Semiburied drip irrigation

Goal	Maximize water efficiency in processing tomatoes.
Short description of the measure	Drip irrigation benefits can be increased if the tubing is buried (at least 15 cm) or semi-buried (about 5 cm). This way water is released closer to the root system and water distribution optimized. Evapotranspiration is also reduced to the maximum.
Quality elements of soundly implemented biodiversity measures	▪ Tubing is buried at least 5 cm. ▪ Tubing must be pulled out from the soil immediately after the harvest.
Effects on biodiversity (ecosystems, species, soil biodiversity)	 Amphibians: with drip surface fertirrigation amphibians are used to go to the tubing to drink. This risk is avoided with a semiburied irrigation.  Aquatic biodiversity.
Other positive effects/benefit for the farmer	Other benefits occur when implementing this technique: wild animals (especially birds and mammals) do not damage the tubing, the risk of the wind blowing the tubing is reduced and fungal diseases in the plant neck reduced. However, farmers have also explained some counter-effects. In the case of the semi-buried technique, if there is a water loss or clogging, it is more difficult to detect the damaged part; the tubing has to be pulled out from the soil immediately after the harvest, otherwise the tubing will break and will remain under the soil. In the buried technique difficulties are much more significant. This long-term tubing is more expensive and a dedicated operation is needed to install it. It only makes sense if the tubing is installed for at least 2 crop seasons. The problem is that truck and tractors' width axles are not the same as the planting beds. As a result, during the harvest operations, heavy weighted machinery pass over the buried tubing and damage it, making it risky for being used again.
Indicator/key data	% of UAA with semiburied drip irrigitation.
Reference	▪ Campillo C. Et al MANUAL PRÁCTICO DE RIEGO TOMATE de INDUSTRIA. Centro de Investigaciones Científicas y Tecnológicas de Extremadura. CICYTEX. Instituto de Investigación Agraria Finca "La Orden-Valdesequera". Guadajira (Badajoz)

Further information: Knowledge Pool

This Action Fact Sheet belongs to the training package for managers of standard organisations and companies and was developed within the project LIFE Food & Biodiversity (Biodiversity in Standards and Labels of for the Food Industry). The main objective of the project is to improve the biodiversity performance of standards and sourcing requirements in the food industry by helping standard organisations to integrate efficient biodiversity criteria into their schemes and motivating food processing companies and retailers to include comprehensive biodiversity criteria into their sourcing guidelines.

Editor: LIFE Food & Biodiversity; Fundación Global Nature

Photo credits: Icons: © nikiteev / Fotolia, © Svgsilh.com

European Project Team

Supported by

EU LIFE programme

Recognized as core initiative by

www.food-biodiversity.eu