

Why

Storage facilities for rainwater have become indispensable for greenhouse growers, as they are required by the regional town planning ordinance to collect water. Also, the quality of rainwater is preferred to that of shallow groundwater.

What

For outdoor growers, building water reservoirs is not common because it is an expensive investment and the need for continuous irrigation is limited because the soil has water holding capacity. Given the changing climate, this may possibly change in the future. This is to capture water in times of precipitation surplus for periods of precipitation deficit. In addition to the existing practice of rainwater basins, there is also the possibility of providing a fixed capture point for surface water (with or without treatment), although this setup is still experimental.

Water reservoirs can be implemented in different ways. For example, the most popular way to store water for the Flemish (greenhouse) (horticultural) grower is a lined basin. There are also other options such as a steel basin, underground water storage, or burying foil. In this fact sheet we focus on water basins. We make a comparative study of the most common foil basins and an ecological water basin.

Cost

A lined basin is in a sense limited in terms of surface area versus usable volume of water. This is because the embankments usually have fixed dimensions. The embankments are usually placed in 45°, they are often one meter wide and the depth of this basin is usually between 4-5 meters. When more than 500 m³ needs to be stored, it is more interesting to place a lined basin than, for example, a water silo.

The biggest costs for a foil basin are the excavation and drainage work (pond, drainage,

filters and pumps) and the foil itself. There is also the ongoing cost of electricity for drainage for a lined basin.

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