



## Monitoring of Soil Fertility in the Agricultural Area of Seedorf, in the Canton Uri Switzerland

OTT Station with LogoSens,  
OTT Parsivel and other Sensors

Solar-supplied monitoring station  
with data transmission via mobile  
GSM , (in the future GPRS)



### Background

In agriculture and forestry soil fertility is a decisive factor for the economic use of fields and forests.

Various factors, considered as a whole are the indicators which characterize the soil fertility.

Important parameters are e.g.:

Intensity of precipitation, air temperature, air humidity, soil humidity, suction power and soil temperature in various depths.

### Task

The Environmental Protection Office of the Canton Uri commissioned the installation of a monitoring test-site in the agricultural area of Seedorf under the leadership of OTT Hydrometrie AG to examine the benefit of monitoring and transmitting important parameters

Tasks of the station:

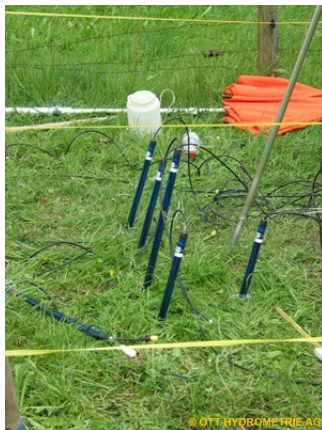
- Monitoring of intensity of precipitation, air temperature, air humidity, soil humidity, suction power and soil temperature in various depths
- Data transmission of measured values
- Alarm in case of exceeded limit values

## Monitoring Solution

- Solar-supplied station equipped with the OTT LogoSens data logger system
- Precipitation measurement with OTT Parsivel (optical laser method).  
Unlike conventional tipping bucket gauges the OTT Parsivel is a maintenance-free device.



- Measuring of suction power in var. depths
- Measuring of soil humidity in var. depths
- Measuring of soil temperature in var. depths



- Data transmission via GSM / SMS. Automatic data transmission once a day
- Up-to-date internet publication of data

## Summary / Look-Out

The station proved to work successful.

Advantages of the station:

- Always available data as basis for decisions
- Active alarm management with little servicing requirement
- Automatic data monitoring and continuous transmission
- Internet publication of data and graphics for a broad public
- Absolute topicality of measured data thanks to recent transmission technology

Owner of the test-site:

OTT HYDROMETRIE AG, Mellingen

Conception and execution:

OTT HYDROMETRIE AG, Mellingen

On-the spot support:

CSD INGENIEURE + GEOLOGEN AG, Altdorf

Authorization and support

Environmental Protection Office URI

Many thanks!

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For more information on OTT solutions and products see [www.ott-hydro.ch](http://www.ott-hydro.ch) and [www.ott.com](http://www.ott.com)

### Technology

**OTT LogoSens2**, Multichannel Data logger and Stationmanager with alarm management  
**OTT Parsivel**; Precipitation Gauge

2 Trime-Sondes

6 Tensiometer

1 Air temperature and humidity sensor