General information

author(s)	Callens M
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Materials & Methods

study area	5n (scientific zone)
time period	
goal	Adapt former models of evapotranspiration so that they include the evaporation of intercepted rainfall. Implement the one- and multiple-layer model in an easy-to-use computer program. Supply a manual for these models.
set-up	
data collection	data from 1997 and from 10–16 August 1999
remarks	expands the work of Claeys_1997_th, Vanoverbeke_1998_th, and DeDekker_1999_th

Results

A module on interception and evaporation of rainfall was added to the one-layer model of Claeys_1997_th and the multi-layer model of Vanoverbeke_1998_th. Both models were implemented in the user-friendly software Visual Basic. Three values, i.e., actual evapotranspiration, potential evapotranspiration, and the actual evapotranspiration including the evaporation of intercepted rainfall, are calculated by the models. The multi-layer model can also estimate the part of the evapotranspiration coming from the tree vs. the shrub layer. The standard parameter values in the models are based on data of the Aelmoeseneie forest.

The models were tested for some datasets collected in the Aelmoeseneie forest. The one-layer model gave high values for potential evapotranspiration, due to the module used to model this variable. Both models gave realistic values for the actual evapotranspiration. The multi-layer model generated higher values for both actual evapotranspiration with and without evaporation of intercepted rainfall.

The evapotranspiration was highest for beech during the study period. For ash, the evapotranspiration on a sunny day was higher for the lower canopy layers.

Soil evaporation was not included in the models. Some of the model parameters still need to be estimated based on Aelmoeseneie data.