## Penman- Monteith

Penman

$$E = s R_N + \rho_a c_p Ca [e_s(T_a) - e_a]$$

$$[s + \gamma] + Ca/(Ccan) \lambda_v$$

(Radiation + VPD) / availability

- s is slope of saturation vapor pressure deficit curve (Pa K-I)
- R net radiation (W m-2)
- pa density of the air (kg m-3)
- cp heat capacity of the air (J kg-I K-I)
- γ psychrometric constant (Pa K-I)
- u wind speed m/2
- Ca aerodynamic conductance (m s-l) often f(windspeed)
- Ccan canopy conductance (plant regulation of water loss)
- es, ea vapor pressure (saturated and actual) could write as (I-relative humidity)\*es
- $\lambda_v$  latent heat of vaporization (MJ kg-I)

Instantaneous!!

