

$$1) R = b_T \times IC$$

$$2) b_T = \int \Gamma(t) C_E d_i dt \approx \sum_i b_i = \sum_i \Gamma_i C_{E,i} d_i \Delta t \quad \text{1 day}$$

$i = t/\text{days}$ (y discretizamos $t \in \mathbb{R} \Rightarrow i \in \mathbb{Z}$)

$$C_T \neq C_T$$

$$\Gamma_i = b_i + b_{i-1} \Rightarrow b_{T,i} = b_i + b_{T,i-1}$$

$$b_i = CT \cdot PAR \cdot EUR_{ACT} \Rightarrow \Gamma_i C_{E,i} d_i \Delta t = b_i = CT \cdot PAR \cdot EUR_{ACT}$$

$$3) \Gamma_i = CT \cdot PAR \cdot EUR_{ACT} \Rightarrow b_i = CT \cdot PAR \cdot EUR_{ACT} \cdot C_{E,i} \cdot d_i \cdot \Delta t$$

$$4) CT = f(CEH(t); C_{in}, C_{max}, \{d\}) \Rightarrow CT(t) = \left[\int_0^t CT(t') dt' \right] \approx \sum_i \Delta CT_i$$

$$\text{con } \Delta CT_i = f(CEH_i; C_{in}, C_{max}, \{d\})$$

$$5) EUR_{ACT} = EUR_{POT} \cdot T^{\circ} EUR \cdot CEHR$$

$$\Rightarrow b_i = \left[\sum_{j=0}^i \Delta CT_j \right] \cdot PAR \cdot EUR_{POT} \cdot T^{\circ} EUR_i \cdot CEHR_i \cdot C_{E,i} \cdot d_i \cdot \Delta t$$

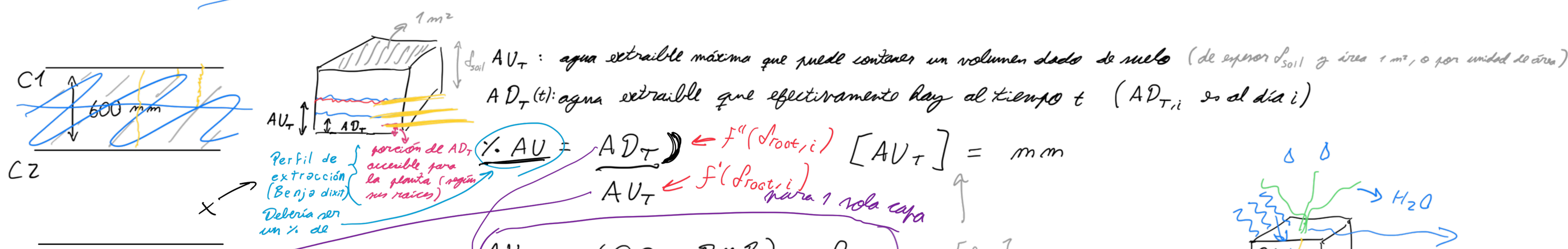
$$f(CEH_i; C_{in}, C_{max}, \{d\})$$

$$CEH_i = 1 - \frac{e^{HRS_i \times \text{Cof. formoH}} - 1}{e^{\text{Cof. formoH}} - 1}$$

$$CEHR_i = 1 - \frac{e^{Rrs_i \times \text{Cof. formoR}} - 1}{e^{\text{Cof. formoR}} - 1}$$

$$Rrs = \frac{(\% AU_i) - U_{ncr}}{(UD_r - U_{ncr}) / 400}$$

$$Hrs = \frac{(\% AU_i) - U_{nc}}{(UD - U_{nc}) / 400}$$



$$AU_T = AU1 + AU2$$

$$AU1 = (CC - PMP) \cdot 600 mm$$

$$AU2_i = (CC - PMP) \cdot \rho_{root,i}$$

$(600 mm - \rho_{root,i})$

$$AU_T(t) = (CC - PMP) \cdot \rho_{root}(t)$$

$$\rho_{root}(t) = \int_0^t \frac{d\rho_{root}(t')}{dt'} dt'$$

$$D = c_D \cdot d_w \Theta(d_w) ; \rho_w = AD_T - AU_T$$

$$AD1_i = AD1_{i-1} + \text{rain}_i - \text{drainage}_i - \text{run off}_i - \text{soil evap}_i - \text{crop transp}_i$$

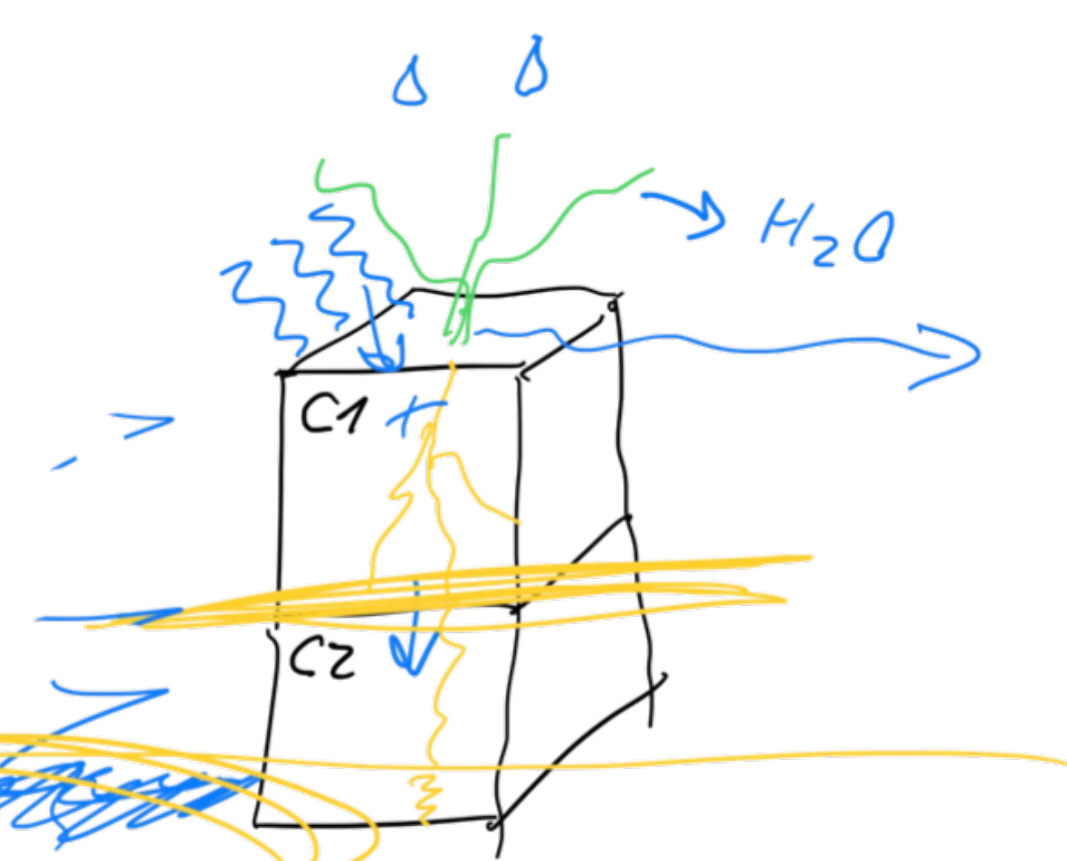
$$AD2_i = AD2_{i-1} + \text{percol} - \text{drainage} - \text{crop transp}_i + \text{available water for root extension } (d_{root,i})$$

via? due to?

$$E = \frac{(PD - 0,2 \cdot S)^2}{PD + S - 0,2 \cdot S}$$

Precipitación

Potential maximum storage: $S = 254 \cdot \frac{900}{CN-1}$ (curve number)



$$\text{días desde precipitación}$$

$$DDP \leq Z \Rightarrow E_s = E_{s, pot}$$

$$DDP > Z \Rightarrow E_s = FE_s \sqrt{DDP}$$

interdependencia?