Introduction to Century Ecosystem Model

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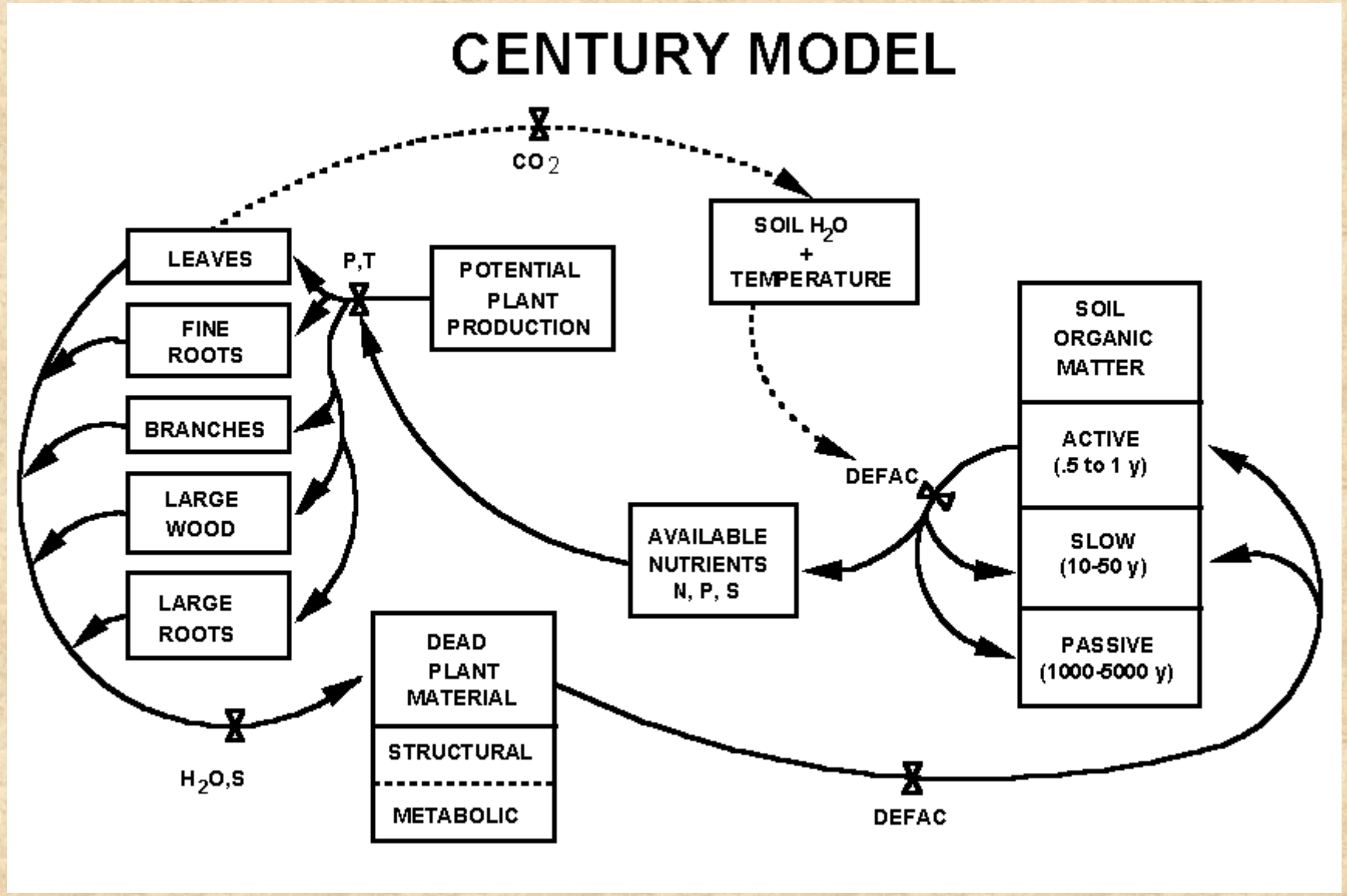
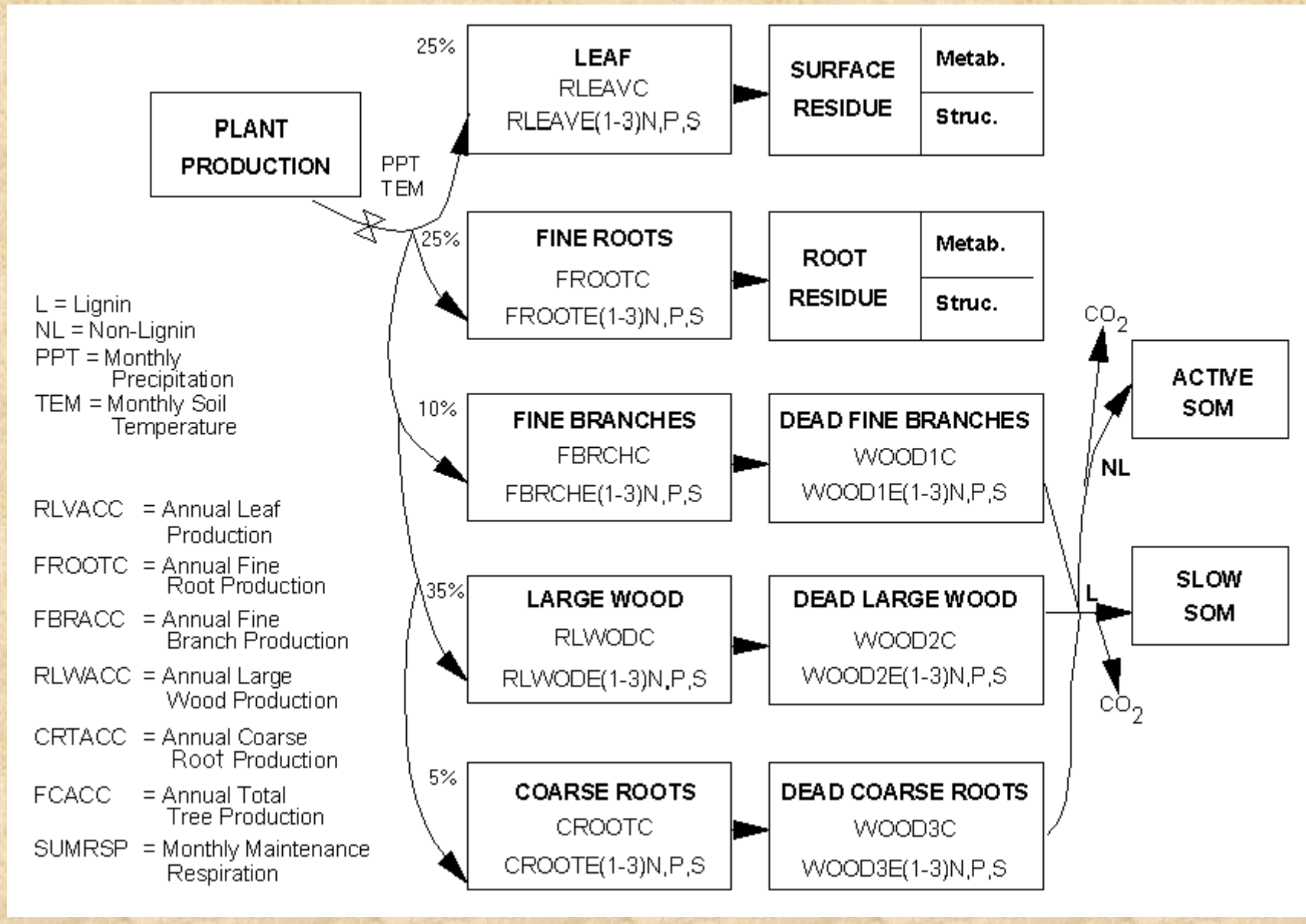
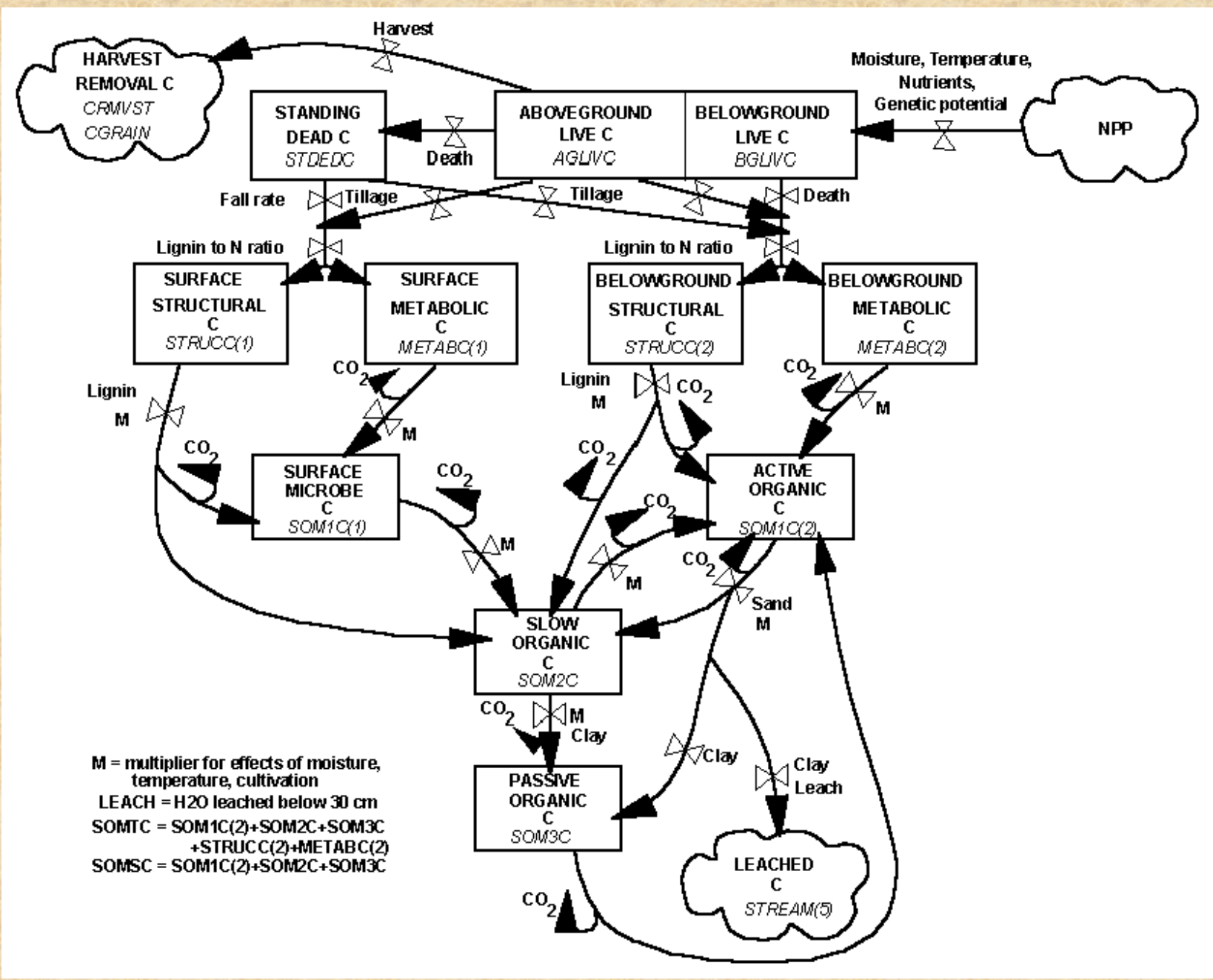
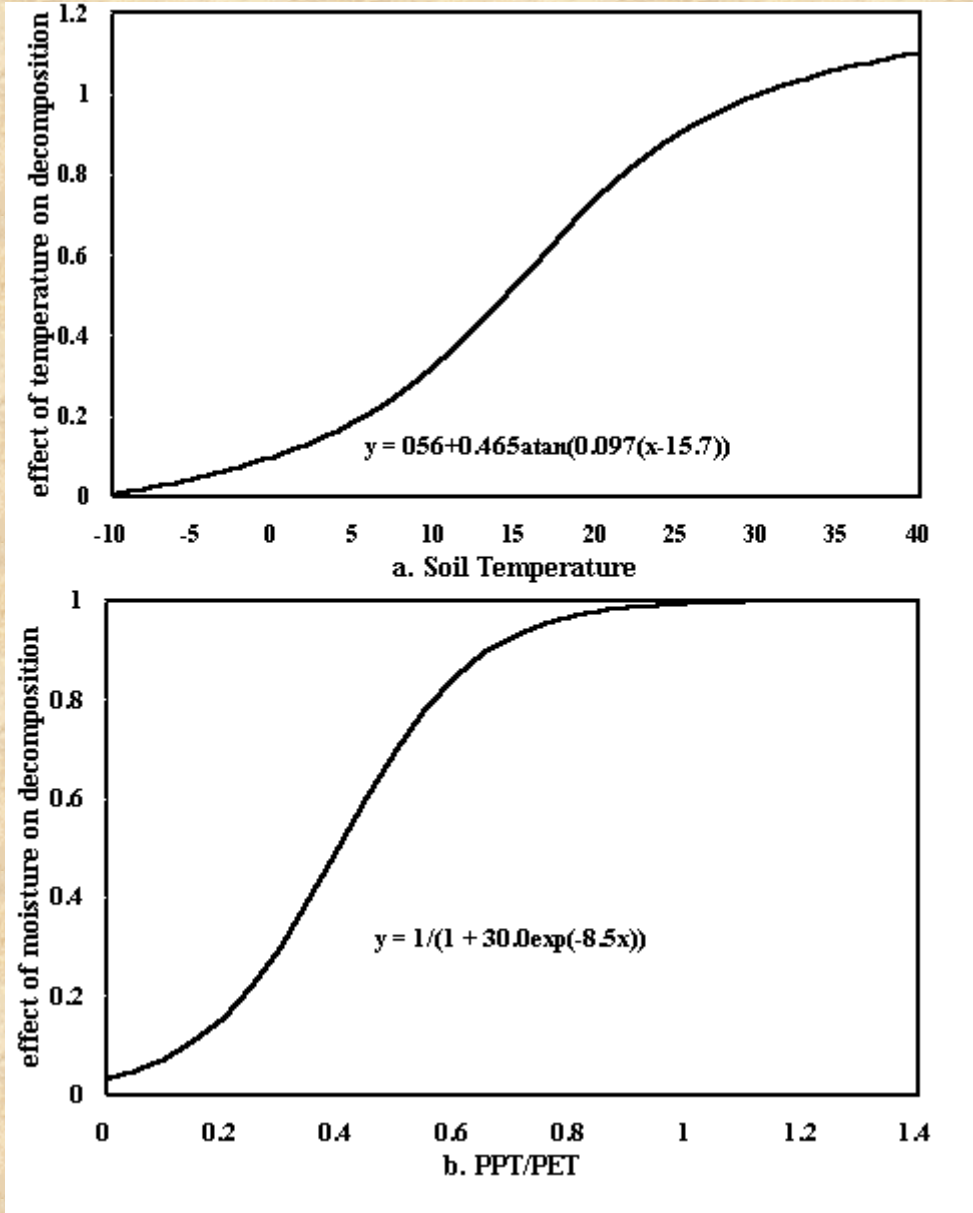


Overall flow diagram for the CENTURY model.

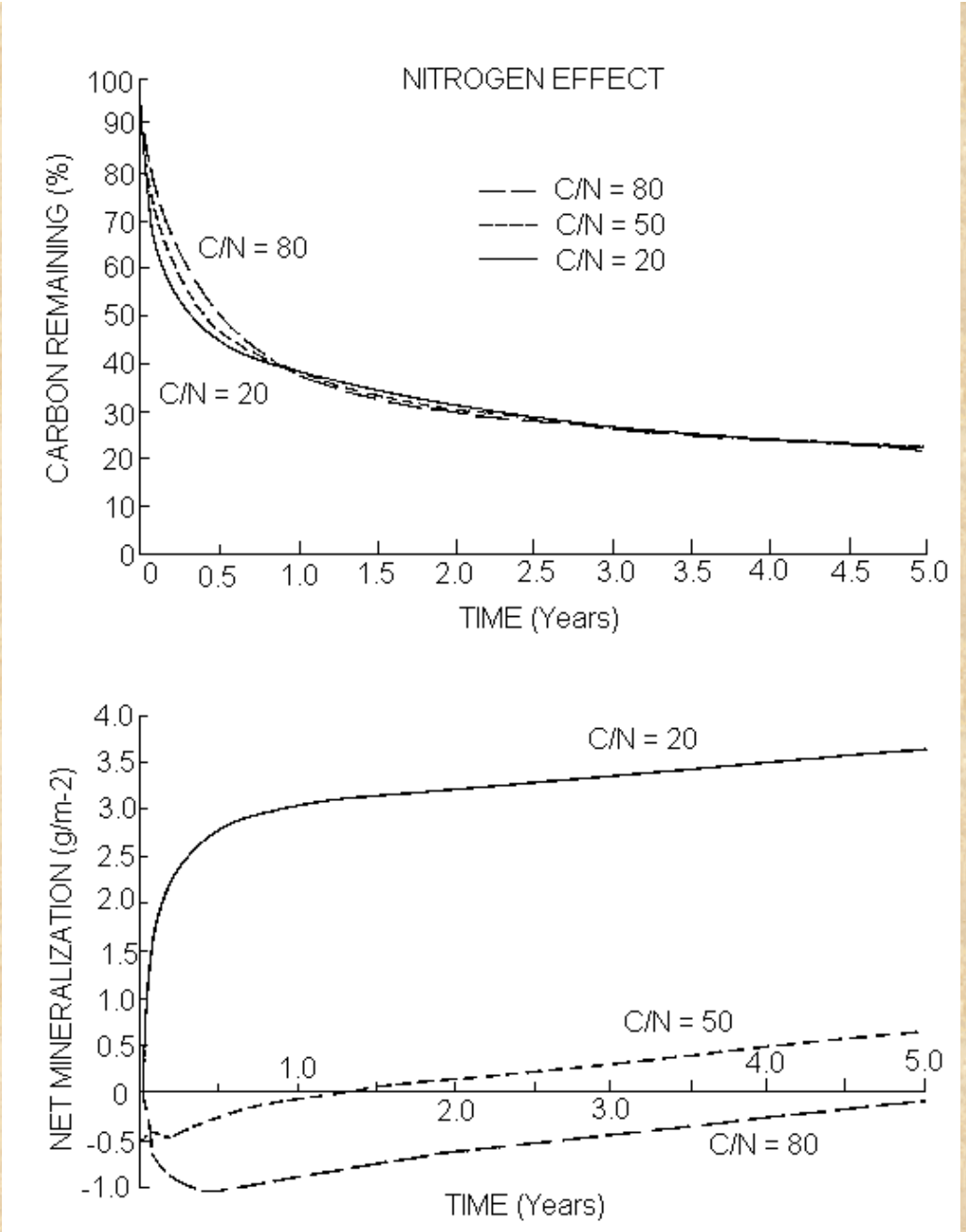


Flow diagram for forest submodel.

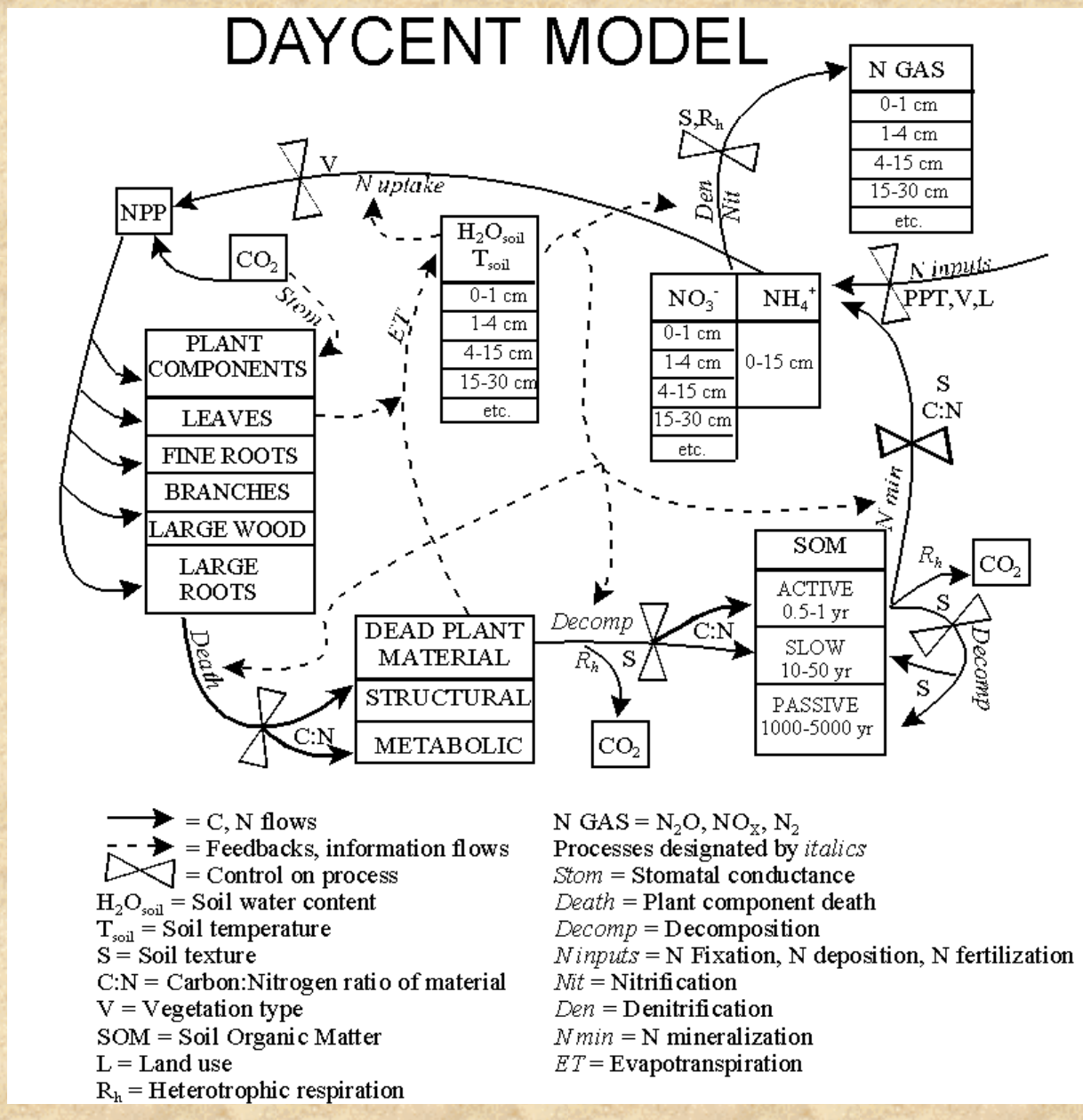

Harvest
HARVEST REMOVAL C
CRMVST
CGRAIN
STANDING DEAD C
STDEDC
Death
ABOVEGROUND LIVE C
AGLIVC
BELOWGROUND LIVE C
BGLIVC
Moisture, Temperature, Nutrients, Genetic potential
NPP
Fall rate
Tillage
Tillage
Death
Lignin to N ratio
Lignin to N ratio
SURFACE STRUCTURAL C
STRUCC(1)
SURFACE METABOLIC C
METABC(1)
BELOWGROUND STRUCTURAL C
STRUCC(2)
BELOWGROUND METABOLIC C
METABC(2)
Lignin
M
CO2
M
CO2
Lignin
M
CO2
CO2
M
SURFACE MICROBE C
SOM1C(1)
CO2
M
ACTIVE ORGANIC C
SOM1C(2)
CO2
M
CO2
Sand
M
SLOW ORGANIC C
SOM2C
CO2
M
Clay
Clay
Clay
Leach
PASSIVE ORGANIC C
SOM3C
LEACHED C
STREAM(5)
CO2
M = multiplier for effects of moisture, temperature, cultivation
LEACH = H2O leached below 30 cm
SOMTC = SOM1C(2)+SOM2C+SOM3C +STRUCC(2)+METABC(2)
SOMSC = SOM1C(2)+SOM2C+SOM3C



Impact of temperature and water on decomposition.



Effect of initial litter N content on litter carbon and N mineralization.



Flow diagram for DAYCENT.