

| <u>variables</u> | <u>explanation</u> | <u>unit</u> |
|------------------|---|-------------|
| YEAR | year of simulation | |
| ***** | ***class level*** | ***** |
| LAYER | forest layer | |
| HEIGHT | tree height | meter |
| AGE | average age | year |
| SPECIES | name | |
| GPP | gross primary production | gC/m2 year |
| AR | autotrophic respiration | gC/m2 year |
| NPP | net primary production | gC/m2 year |
| NPE | annual net production efficiency-NPE (aut resp/gpp) | % |
| LAI | annual PEAK lai | m2/m2 |
| AVDBH | avg dbh | cm |
| Ntree | number of trees | tree |
| CET | canopy evapotranspiration | nm/m2 year |
| CLE | canopy latent heat | W/m2 |
| WRes | reserve biomass (starch and sugar) | t/ha |
| WS | stem biomass toal live + dead | tC/ha |
| WSL | live "respiring"stem biomass | tC/ha |
| WSD | dead stem biomass | tC/ha |
| PWL | leaf biomass at Peak LAI | tC/ha |
| PWFR | fine root biomass at Peak LAI | tC/ha |
| WCR | coarse root biomass toal live + dead | tC/ha |
| WCRL | live "respiring" coarse root biomass | tC/ha |
| WCRD | dead coarse root biomass | tC/ha |
| WBB | branch toal live + dead | tC/ha |
| WBBL | live "respiring" branch biomass | tC/ha |
| WBBD | dead branch biomass | tC/ha |
| SAR | stem aut respiration | gC/m2 year |
| LAR | leaf aut resp | gC/m2 year |
| FAR | fine root aut resp | gC/m2 year |
| CRAR | coarse root aut resp | gC/m2 year |
| BBAR | branch aut resp | gC/m2 year |
| ***** | ***cell level*** | ***** |
| gpp | gross primary production | gC/m2 year |
| npp | net primary production | gC/m2 year |
| ar | autotrophic respiration | gC/m2 year |
| npe | annual net production efficiency-NPE (aut resp/gpp) | % |
| et | cell evapotransiration (canopy + soil) | mm/m2 |
| le | cell latent heat (canopy + soil) | W/m2 |
| asw | cell available soil water | mm/m2 |
| ***** | ***** | ***** |

note: variables are updated at the enf of the year
dead = non respiring