Table 7.1. Variables, acronyms, and examples of units in the GENECROP crop growth simulation model

Variable type	Acronym	Meaning	Units
State variables	LEAFB	Leaf biomass	$g \cdot m^{-2}$
	POOL	Pool of biomass produced from photosynthesis	$g \cdot m^{-2}$
	REPTIL	Number of reproductive tillers (shoots)	$Ntil \cdot m^{-2}$
	ROOTB	Root biomass	$g \cdot m^{-2}$
	STEMB	Stem biomass	$g \cdot m^{-2}$
	STEMP	Sum of temperature above threshold	°C·day
	STORB	Storage organ biomass	$g \cdot m^{-2}$
	VTIL	Number of vegetative tillers (shoots)	$Ntil \cdot m^{-2}$
Rates	DTEMP	Rate of increase in sum of temperature	°C
	PARTL	Rate of partitioning of assimilates towards leaves	$g \cdot m^{-2} \cdot day^{-1}$
	PARTR	Rate of partitioning of assimilates towards roots	$g \cdot m^{-2} \cdot day^{-1}$
	PARTSO	Rate of partitioning of assimilates towards storage organs	$g \cdot m^{-2} \cdot day^{-1}$
	PARTS	Rate of partitioning of assimilates towards stems	$g \cdot m^{-2} \cdot day^{-1}$
	RMAT	Rate of tiller (shoot) maturity	$Ntil \cdot m^{-2} \cdot day^{-1}$
	RG	Rate of crop growth	$g \cdot m^{-2} \cdot day^{-1}$
	RMORTV	Rate of mortality of vegetative tillers (shoots)	$Ntil \cdot m^{-2} \cdot day^{-1}$
	RMORTR	Rate of mortality of reproductive tillers (shoots)	$Ntil \cdot m^{-2} \cdot day^{-1}$
	RSENL	Rate of leaf senescence	$g \cdot m^{-2} \cdot day^{-1}$
	RTIL	Rate of tillering (of shoot emergence)	$Ntil \cdot m^{-2} \cdot day^{-1}$
	RTRANSLOC	Rate of translocation of carbohydrates from stems to storage organs	$g \cdot m^{-2} \cdot day^{-1}$
	LAI	Leaf area index	$m^2 \cdot m^{-2}$
Computed variables	TOTIL	Total number of tillers	$Ntil \cdot m^{-2}$
	k	Coefficient of light extinction	-
Parameters	FST	Fraction of sterile tillers (shoots) after flowering	-

	MAXTIL	Maximum number of tillers (shoots)	$Ntil \cdot m^{-2}$
	RRMAT	Relative rate of tiller maturity	$Ntil \cdot Ntil^{-1}$
	STW	Dry biomass of a new tiller (shoot)	$g \cdot Ntil^{-1}$
	TBASE	Temperature threshold for crop development	°C
	TFLOW	Sum of temperature above threshold to reach flowering stage	°C·day
	TMAT	Sum of temperature above threshold to reach crop maturity	°C·day
	RAD	Daily global radiation	$MJ \cdot m^{-2} \cdot day^{-1}$
Driving functions Weather	TMIN	Daily minimum temperature	°C
	TMAX	Daily maximum temperature	°C
	CPL	Coefficient of partitioning of assimilates towards leaves	-
Interpolated variables	CPR	Coefficient of partitioning of assimilates towards roots	-
	CPSO	Coefficient of partitioning of assimilates towards storage organs	-
	CPS	Coefficient of partitioning of assimilates towards stems	-
	DVE	Fraction of assimilates allocated to the production of new tillers (shoots)	-
	DVS	Development Stage	-
	RRSENL	Relative rate of leaf senescence	$g \cdot g^{-1}$
	RUE	Radiation Use efficiency	$g \cdot MJ^{-1}$
	SLA	Specific Leaf Area	$m^2 \cdot g^{-1}$