



1 OilPalm

Properties (Outputs)

Name	Units	Type	Settable?
AboveGround	Aboveground mass	IBiomass	False
Age	Time since planting	double	True
Albedo	Albedo.	double	False
BunchGrowth	gms bunch dry matter growth	double	True
BunchMass	gms the bunch mass.	double	False

Name	Units	Type	Settable?
BunchN	gms² the bunch n.	double	False
BunchNConc	gms the bunch n conc.	double	False
CanopyType	Canopy type	String	False
CarbonStress	Amount of carbon limitation for todays potential growth (ie supply/demand)	double	True

Name	Units	Type	Settable?
cover_green	Gets the cover_green.	double	False
cover_tot	Total cover provided by plant canopies	double	False
CoverGreen	Gets the cover green (0- 1)	double	False
CoverTotal	Gets the cover total (0- 1)	double	False

Name	Units	Type	Settable?
CultivarNames	Gets a list of cultivar names	String	False
CumulativeBunchNumber	Cumulative bunch production since planting	double	True
CumulativeFrondNumber	Cumulative frond production since planting	double	True
DefoliationFraction	Gets or sets the defoliation fraction.	double	True

Name	Units	Type	Settable?
Depth	Gets the canopy depth (mm)	double	False
DiffuseLightFraction	Gets the diffuse light fraction.	double	False
DltDM	Daily total plant dry matter growth	double	True
EP	daily evapotranspiration from the palm canopy	double	True

Name	Units	Type	Settable?
FFF	Gets the FFF.	double	False
Fn	Factor for daily nitrogen stress effect on photosynthesis	double	True
FRGR	Gets the LAI (m ² /m ²) 2)	double	False
Fron17Area	Gets the frond17 area.	double	False

Name	Units	Type	Settable?
FronArea	Gets the frond area.	double	False
FronGrowth	Gets frond dry matter growth	double	True
FronMass	Gets the frond mass.	double	False
FronN	Gets the frond n.	double	False
FronNConc	Gets the frond n conc.	double	False

Name	Units	Type	Settable?
FrondNumber	Cal the frond number.	double	False
Fvpd	Factor for daily VPD effect on photosynthesis	double	True
FW	Factor for daily water stress effect on photosynthesis	double	True

Name	Units	Type	Settable?
Gsmax	Gets or sets the gsmax.	double	False
HarvestBunches	Number of bunches harvested on a harvesting event	double	True
HarvestBunchSize	Mean size of bunches at a harvesting event	double	True

Name	Units	Type	Settable?
HarvestFFB	Mass of harvested FFB on a harvesting event	double	True
HarvestNRemoved	Nitrogen removed at a harvesting event	double	True
Height	Gets the canopy height (mm)	double	False

Name	Units	Type	Settable?
IsAlive	Is the plant alive?	boolean	False
IsC4	Gets a value indicating whether the biomass is from a c4 plant or not	boolean	False

Name	Units	Type	Settable?
IsCropInGround	<p>Get/False</p> <p>or</p> <p>sets</p> <p>a</p> <p>value</p> <p>indicating</p> <p>whether</p> <p>this</p> <p>instance</p> <p>is</p> <p>crop</p> <p>in</p> <p>ground.</p>	boolean	True
IsReadyForHarvesting	<p>Returns</p> <p>true</p> <p>if</p> <p>the</p> <p>crop</p> <p>is</p> <p>ready</p> <p>for</p> <p>harvesting</p>	boolean	False

Name	Units	Type	Settable?
LAI	Gets the lai.	double	True
LAI _{Total}	Gets the maximum LAI (m ² /m ²)	double	False
LightProfile	MicroClimate supplies LightProfile	CanopyEnergyBalanceInterceptio...	True
MaximumRootDepth	Gets or sets the maximum root depth.	double	True

Name	Units	Type	Settable?
NitrogenUptake	kg daily nitrogen uptake from each soil layer by palms	double	True
PEP	mmol potential daily evapotranspiration for the palm canopy	double	True
PlantN	g the plant n.	double	False

Name	Units	Type	Settable?
PlantType	The plant type.	String	False
Population	Gets or sets the population.	double	True
PotentialEP	Potential evapotranspiration	double	True
R50	Gets or sets the R50.	double	False

Name	Units	Type	Settable?
ReproductiveGrowthFraction	Proportion of daily growth partitioned into reproductive parts	double	True
RootDepth	Rooting Depth	double	True
RootGrowth	root dry matter growth	double	True
RootMass	the root mass.	double	False

Name	Units	Type	Settable?
RootN	g m ⁻² the root n.	double	False
RootNConc	g m ⁻² the root n conc.	double	False
SLA	m ² /g the sla.	double	False
StemGrowth	g m ⁻² stem dry matter growth	double	True

Name	Units	Type	Settable?
StemMass	Gets or sets the stem mass.	double	True
StemN	Gets or sets the stem n.	double	True
TotalFronNumber	Gets the total frond number.	double	False

Name	Units	Type	Settable?
UnderstoryCoverGreen	Proportion of green cover provided by the understory canopy	double	True
UnderstoryCoverMax	Gets or sets the understory cover maximum.	double	True
UnderstoryDltDM	Daily understory dry matter growth	double	True

Name	Units	Type	Settable?
UnderstoryEP	Daily evapotranspiration for the understory	double	True
UnderstoryFW	Understory plant water stress factor	double	True
UnderstoryLegumeFraction	Gets or sets the understory legume fraction.	double	True
UnderstoryNFixation	Daily understory nitrogen fixation	double	True

Name	Units	Type	Settable?
UnderstoryNUptake	Actual soil nitrogen uptake from each soil layer by understory	double	True
UnderstoryPEP	Potential daily evapotranspiration for the understory	double	True

Name	Units	Type	Settable?
UnderstoryPotNUptake	Potential nitrogen water uptake from each soil layer by understory	double	True
VPD	VPDs this instance.	double	False
WaterDemand	Sets the actual water demand.	double	True
WaterUptake	The sw uptake	double	True

Name	Units	Type	Settable?
Width	Gets the width of the canopy (mm).	double	False

Links (Dependencies)

Name	Type	IsOptional?
BunchFailureFraction	IFunction	False
BunchNConcentration	IFunction	False
BunchOilConversionFactor	IFunction	False
BunchSizeMax	IFunction	False
Clock	IClock	False
DiffuseExtinctionCoeff	IFunction	False
DirectExtinctionCoeff	IFunction	False
ExpandingFronds	IFunction	False
FemaleFlowerFraction	IFunction	False
FFFStressImpact	IFunction	False
FlowerAbortionFraction	IFunction	False
FronDAppearanceRate	IFunction	False
FronDCriticalNConcentration	IFunction	False
FronDMaxArea	IFunction	False

Name	Type	IsOptional?
FronMaximumNConcentration	IFunction	False
FronMinimumNConcentration	IFunction	False
HarvestFronNumber	IFunction	False
InitialFronNumber	IFunction	False
KNO3	IFunction	False
MetData	IWeather	False
NO3	ISolute	False
nutrient	Nutrient	False
RelativeDevelopmentalRate	IFunction	False
RipeBunchWaterContent	IFunction	False
RootFraction	IFunction	False
RootFrontVelocity	IFunction	False
RootNConcentration	IFunction	False
RootSenescenceRate	IFunction	False
RUE	IFunction	False
Soil	Soil	False
soilPhysical	IPhysical	False
SpecificLeafArea	IFunction	False
SpecificLeafAreaMax	IFunction	False
StemNConcentration	IFunction	False
StemToFronFraction	IFunction	False
Summary	ISummary	False
waterBalance	ISoilWater	False

Events published

Name	Type
BiomassRemoved	Void BiomassRemoved (BiomassRemovedType Data)
Harvesting	Void Harvesting (Object sender, EventArgs e)
Sowing	Void Sowing (Object sender, EventArgs e)

Methods (callable from manager)

Name	Description
BiomassRemovalComplete	void BiomassRemovalComplete(double fractionRemoved) <i>Biomass has been removed from the plant.</i>
Document	ITag Document()
EndCrop	void EndCrop()
GetNitrogenUptakeEstimates	ZoneWaterAndN GetNitrogenUptakeEstimates(SoilState soilstate) <i>Placeholder for SoilArbitrator</i>
GetWaterUptakeEstimates	ZoneWaterAndN GetWaterUptakeEstimates(SoilState soilstate) <i>Placeholder for SoilArbitrator</i>
Harvest	void Harvest(boolean removeBiomassFromOrgans) <i>Harvest the crop.</i>
SetActualNitrogenUptakes	void SetActualNitrogenUptakes(ZoneWaterAndN info)
SetActualWaterUptake	void SetActualWaterUptake(ZoneWaterAndN info)
Sow	void Sow(String cultivar, double population, double depth, double rowSpacing, double maxCover, double budNumber, double rowConfig, double seeds, int32 tillering, double ftn) <i>Sows the specified cultivar.</i>