1 Sugarcane

Properties (Outputs)

Name	Description	Un	Type	Settable?
AboveGround	Aboveground mass		IBiomass	False
Albedo	Albedo.		double	False
biomass	Gets the biomass.	(g/m^2)	double	False
biomass_n	Gets the biomass_n.	(g/m^2)	double	False
cabbage_wt	Gets the cabbage_wt.	(g/m^2)	double	False
cane_dmf	Gets the cane_dmf. Cane Dry Matter Fraction. The Millable Stalk divided by the Millable Stalk (FRESH). nb. Millable Stalk is only the green "structual stem" and "sucrose". nb. Fresh refers to when the Cane has just been cut and still has high water content hence we add some extra water to the weight.	(0-1)	double	False
cane_wt	Gets the cane_wt. nb. Cane refers to the "structual stem" and "sucrose" in green and dead stalks.	(g/m^2)	double	False
canefw	Gets the canefw. Cane Fresh Weight. nb. Cane refers to the "structual stem" and "sucrose" in green and dead stalks. nb. Fresh refers to when the Cane has just been cut and still has high water content hence we add some extra water to the weight.	(t/ha)	double	False

Name	Description	Un	Type	Settable?
CanopyType	Canopy type		String	False
ccs	Gets the CCS. Commercial Cane Sugar.	(%)	double	False
cep	Gets the cep.	(mm)	double	False
cover_green	Gets the cover_green.	()	double	False
cover_tot	Gets the cover_tot.	()	double	False
CoverGreen	Gets the cover green (0-1)		double	False
CoverTotal	Gets the cover total (0-1)		double	False
crop_status	Gets the crop_status.	()	String	False
crop_type	Gets or sets the crop_type.	()	String	True
CropType	MicroClimate will get 'CropType' and use it to look up canopy properties for this crop.		String	False
CultivarNames	Gets a list of cultivar names		String	False
cultivars	Gets or sets the cultivars.		CultivarConstants	True
DaysAfterSowing	Gets the days after sowing.	(days)	int32	False
dead_leaves	Gets the dead_leaves.	()	double	False
Depth	Gets the canopy depth (mm)		double	False
dlayer_lb	Gets or sets the dlayer_lb.	mm	double	True
dlayer_ub	Gets or sets the dlayer_ub.	mm	double	True
dlt_dm	Gets the DLT_DM. Delta Dry Matter. Todays change in biomass.	(g/m^2)	double	False
dlt_dm_detached	Gets the dlt_dm_detached. Delta Dry Matter Detached. Todays dry matter that got detached from each plant part. Elements of this array are the plant parts, 1 root 2 leaf 3 structural stem 4 cabbage 5 sucrose	(g/m^2)	double	False

Name	Description	Un	Type	Settable?
dlt_dm_green	Gets the dlt_dm_green. Delta Dry Matter Green. Todays change in green biomass.	(g/m^2)	double	False
dlt_n_green	Gets the dlt_n_green.	(g/m^2)	double	False
dm_dead	Gets the dm_dead.	(g/m^2)	double	False
dul_dep_lb	Gets or sets the dul_dep_lb.	mm	double	True
dul_dep_ub	Gets or sets the dul_dep_ub.	mm	double	True
eo_crop_factor	Gets or sets the eo_crop_factor.		double	True
ep	Gets the ep.	(mm)	double	False
esw_layr	Gets the esw_layr.	(mm)	double	False
fasw	Gets the fasw.	(0-1)	double	False
FRGR	Gets FRGR.		double	False
green_biomass	Gets the green_biomass.	(g/m^2)	double	False
green_biomass_n	Gets the green_biomass_n.	(g/m^2)	double	False
green_leaves	Gets the green_leaves.	()	double	False
greenn	Gets the greenn.	(g/m^2)	double	False
greenwt	Gets the greenwt.	(g/m^2)	double	False

Name	Description	Un	Type	Settable?
Gsmax	Gets or sets the gsmax.		double	False
Height	Gets the canopy height (mm)		double	False
height	Gets the canopy height (mm)	(mm)	double	False
IsAlive	Is the plant alive?		boolean	False
IsC4	Gets a value indicating whether the biomass is from a c4 plant or not		boolean	False
IsReadyForHarvesting	Returns true if the crop is ready for harvesting		boolean	False
kl_ub	Gets or sets the kl_ub.	oC	double	True
knh4	Gets or sets the KNH4.	/day	double	True
kno3	Gets or sets the kno3.	/day	double	True
LAI	Gets the LAI (m^2/m2)		double	True
lai	Gets the LAI (m^2/m2)	(m^2/m2)	double	False
lai_sum	Gets the lai_sum.	()	double	False
lai2	Gets the lai2.	(g/m^2)	double	False
LAITotal	Gets the maximum LAI (m^2/m2)		double	False
latitude_lb	Gets or sets the latitude_lb.	oL	double	True
latitude_ub	Gets or sets the latitude_ub.	oL	double	True
leaf_area	Gets the leaf_area.	()	double	False
leaf_dm	Gets the leaf_dm.	()	double	False
leaf_no	Gets the leaf_no.	()	double	False
leaf_wt2	Gets the leaf_wt2.	(g/m^2)	double	False

Name	Description	Un	Type	Settable?
leafgreen	Gets the leafgreenwt.	(g/m^2)	double	False
leaves	Gets the leaves.	()	double	False
LightProfile	MicroClimate calculates a layered canopy energy balance and sets this property in the crop.		List< CanopyEnergyBalanceInterceptio... >	True
ll_dep	Gets the ll_dep.	(mm)	double	False
ll_ub	Gets or sets the ll_ub.	oC	double	True
lodge_redn_green_leaf	Gets or sets the lodge_redn_green_leaf.	()	double	True
lodge_redn_photo	Gets or sets the lodge_redn_photo.	()	double	True
lodge_redn_sucrose	Gets or sets the lodge_redn_sucrose.	()	double	True
maxt_ub	Gets or sets the maxt_ub.	oC	double	True
minsw	Gets or sets the minsw.		double	True
mint_lb	Gets or sets the mint_lb.	oC	double	True
mint_ub	Gets or sets the mint_ub.	oC	double	True
n_conc_cab	Gets the n_conc_cab.	(g/m^2)	double	False
n_conc_cane	Gets the n_conc_cane.	(g/m^2)	double	False
n_conc_leaf	Gets the n_conc_leaf.	(g/m^2)	double	False
n_critical	Gets the n_critical.	(g/g)	double	False
n_demand	Gets the n_demand.	(g/m^2)	double	False

Name	Description	Unit	Type	Settable?
n_green	Gets the n_green.	(g/m^2)	double	False
n_leaf_crit	Gets the n_leaf_crit.	(g/m^2)	double	False
n_leaf_min	Gets the n_leaf_min.	(g/m^2)	double	False
n_minimum	Gets the n_minimum.	(g/g)	double	False
n_supply	Gets the n_supply.	(g/m^2)	double	False
n_supply_preference	Gets or sets the n_supply_preference.		String	True
n_uptake_option	Gets or sets the n_uptake_option.		int32	True
nfact_expan	Gets the nfact_expan.	()	double	False
nfact_photo	Gets the nfact_photo.	()	double	False
NH4_lb	Gets or sets the n H4_LB.	kg/ha	double	True
NH4_min_lb	Gets or sets the n h4_min_lb.	kg/ha	double	True
NH4_min_ub	Gets or sets the n h4_min_ub.	kg/ha	double	True
NH4_ub	Gets or sets the n h4_ub.	kg/ha	double	True
nh4_uptake	Gets the nh4_uptake.	(g/m2)	double	False
nh4_uptake_pot	Gets the nh4_uptake_pot.	(g/m2)	double	False
nh4ppm_min	Gets or sets the nh4ppm_min.	oC	double	True
Nitrogen Uptake	Gets the no3_uptake.	(g/m2)	double	False
no3_demand	Gets the no3_demand.	(kg/ha)	double	False
NO3_diffn_const	Gets or sets the n o3_diffn_const.	days	double	True

Name	Description	Units	Type	Settable?
NO3_lb	Gets or sets the n o3_lb.	kg/ha	double	True
NO3_min_lb	Gets or sets the n o3_min_lb.	kg/ha	double	True
NO3_min_ub	Gets or sets the n o3_min_ub.	kg/ha	double	True
no3_tot	Gets the no3_tot.	(g/m^2)	double	False
NO3_ub	Gets or sets the n o3_ub.	kg/ha	double	True
no3_uptake_pot	Gets the no3_uptake_pot.	(g/m2)	double	False
no3ppm_min	Gets or sets the no3ppm_min.	oC	double	True
node_no_dead	Gets the node_no_dead.	()	double	False
node_no_detached	Gets the node_no_detached.	()	double	False
num_layers	Gets the num_layers.		int32	False
oxdef_photo	Gets the oxdef_photo.	(0-1)	double	False
partition_xs	Gets the partition_xs. Todays excess biomass. Not needed after partitioning todays biomass to plant organs.	(g/m^2)	double	False
phase_tt	Gets the phase_tt.	(oC)	double	False
plant	Gets or sets the plant.		CropConstants	True
plant_n_tot	Gets the plant_n_tot.	(g/m^2)	double	False
plants	Gets or sets the plants.	(/m2)	double	True
PlantType	The plant type.		String	False
PotentialEP	Gets the potential evapotranspiration.		double	True
R50	Gets or sets the R50.		double	False

Name	Description	Un	Type	Settable?
radn_int	Gets the radn_int.	(mj/m2)	double	False
radn_lb	Gets or sets the radn_lb.	MJ/m^2	double	True
radn_ub	Gets or sets the radn_ub.	MJ/m^2	double	True
ratoon	Gets or sets the ratoon.		CropConstants	True
ratoon_no	Gets the ratoon_no.	()	int32	False
rlv_init	Gets or sets the rlv_init.		double	True
rlv_tot	Gets the rlv_tot.	(mm/mm3)	double	False
root_depth	Gets the root_depth.	(mm)	double	False
rootgreenwt	Gets the rootgreenwt.	(g/m^2)	double	False
RootLengthDensityRLV	Gets the RLV.	(mm/mm3)	double	False
scmst	Gets the SCMST. Sucrose Concentration in Millable Stalk. nb. Millable Stalk is only the green "structual stem" and "sucrose".	(g/g)	double	False
scmstf	Gets the SCMSTF. Sucrose Concentration in Millable Stalk (FRESH) nb. Millable Stalk is only the green "structual stem" and "sucrose". nb. Fresh refers to when the Cane has just been cut and still has high water content hence we add some extra water to the weight.	(g/g)	double	False
senescedn	Gets the senescedn.	(g/m^2)	double	False
senescedwt	Gets the senescedwt.	(g/m^2)	double	False
slai	Gets the slai.	()	double	False

Name	Description	Un	Type	Settable?
sstem_wt	Gets the sstem_wt. Structural Stem Weight Just the Stem (without the Sucrose) of green and dead stalks.	(g/m^2)	double	False
stage	Gets the stage.	()	double	False
stage_code	Gets the stage_code.	()	double	False
stagename	Gets the stagename.	()	String	False
sucrose_wt	Gets the sucrose_wt. Sucrose in the green and dead stalks.	(g/m^2)	double	False
sw_demand	Gets the sw_demand.	(mm)	double	False
sw_demand_te	Gets the sw_demand_te.	(mm)	double	False
sw_dep_lb	Gets or sets the sw_dep_lb.	mm	double	True
sw_dep_ub	Gets or sets the sw_dep_ub.	mm	double	True
sw_uptake	Gets the sw_uptake.	(mm)	double	False
swdef_expan	Gets the swdef_expan.	()	double	False
swdef_pheno	Gets the swdef_pheno.	()	double	False
swdef_photo	Gets the swdef_photo.	()	double	False
swdef_stalk	Gets the swdef_stalk.	()	double	False
tla	Gets the tla.	()	double	False
tlai	Gets the tlai.	()	double	False
total_n_uptake_max	Gets or sets the total_n_uptake_max.	g/m2	double	True
tt_begcane_to_flowering_ub	Gets or sets the tt_begcane_to_flowering_ub.		double	True
tt_emerg_to_begcane_ub	Gets or sets the tt_emerg_to_begcane_ub.		double	True
tt_flowering_to_crop_end_ub	Gets or sets the tt_flowering_to_crop_end_ub.	oC	double	True
tt_tot	Gets the tt_tot.	(oC)	double	False

Name	Description	Un	Type	Settable?
uptake_source	Gets or sets the uptake_source.		String	True
WaterDemand	Sets the actual water demand.	mm	double	True
WaterUptake	Soil water uptake - positive values.		double	False
Width	Gets the width of the canopy (mm).		double	False

Links (Dependencies)

Name	Type	IsOptional?
Clock	Clock	False
NH4	ISolute	False
NO3	ISolute	False
Soil	Soil	False
soilPhysical	IPhysical	False
Summary	ISummary	False
waterBalance	ISoilWater	False
Weather	IWeather	False

Events published

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

Methods (callable from manager)

Name	Description
accumulate_ob	void accumulate_ob(double i_value, double i_array_zb, double i_index_ob, double i_dlt_index)
accumulate_zb	void accumulate_zb(double i_value, double io_array_zb, double i_index_zb, double i_dlt_index)
BiomassRemovalComplete	void BiomassRemovalComplete(double fractionRemoved) *Biomass has been removed from the plant.*
bound	double bound(double A, double MinVal, double MaxVal) *Bounds the specified a.*
bound_check_integer_var	void bound_check_integer_var(int32 value, int32 lower, int32 upper, String vname) *Bound_check_integer_vars the specified value.*
EndCrop	void EndCrop()
error_margin	double error_margin(double Variable) *Error_margins the specified variable.*
fill_real_array	void fill_real_array(double A_zb, double Value, int32 StopLayer_ob)
get_cumulative_index_real	int32 get_cumulative_index_real(double cum_sum, double A) *Get_cumulative_index_reals the specified cum_sum.*
GetNitrogenUptakeEstimates	List<ZoneWaterAndN> GetNitrogenUptakeEstimates(SoilState soilstate) *Placeholder for SoilArbitrator*
GetWaterUptakeEstimates	List<ZoneWaterAndN> GetWaterUptakeEstimates(SoilState soilstate) *Placeholder for SoilArbitrator*
Harvest	void Harvest()
HarvestCrop	void HarvestCrop()

Name	Description
HillUpTheSoil	void HillUpTheSoil(double CaneFr, double TopsFr) *Mound soil around base of crop and bury some plant material. Burying the plant material incorporates it as fresh organic matter into the Soil. This applies no matter the state of the plant material: Green, Senesced and Dead Can only do a HillUp during the Emergence phase (Sprouting to BeginCane).*
KillCrop	void KillCrop()
l_bound	double l_bound(double A, double MinVal) *L_bounds the specified a.*
linint_3hrly_temp	double linint_3hrly_temp(double i_tmax, double i_tmin, double i_temps, double i_y) *Linint_3hrly_temps the specified i_tmax.*
LodgeTheCane	void LodgeTheCane()
max	double max(double A) *Allows any number of parameters (unlike Math.Max())*
min	double min(double A) *Allows any number of parameters (unlike Math.Min())*
on_day_of	boolean on_day_of(int32 stage_no, double current_stage) *On_day_ofs the specified stage_no.*
root_proportion	double root_proportion(int32 Layer_ob, double Dlayer, double RootDepth) *Root_proportions the specified layer_ob.*
SetActualNitrogenUptakes	void SetActualNitrogenUptakes(List<ZoneWaterAndN> info)
SetActualWaterUptake	void SetActualWaterUptake(List<ZoneWaterAndN> info)
Sow	void Sow(String cultivar, double population, double depth, double rowSpacing, double maxCover, double budNumber, double rowConfig) *Sows the plant*

Name	Description
SowNewPlant	void SowNewPlant(double PlantingDensity, double Depth, String CultivarName) *Sow a Newly Planted Sugarcane Crop. (crop_status is set to "crop_alive") Sugarcane will keep ratooning indefinitely until it is stopped by using an EndCrop or KillCrop. NB. All Ratoons are treated the same. No difference between first ratoon and second, third etc.*
SowRatoon	void SowRatoon(double PlantingDensity, double Depth, String CultivarName, int32 StartingRatoonNo) *Sow a Sugarcane Crop BUT starting with a Ratoon instead of Newly Planted Crop. (crop_status is set to "crop_alive") However can still sow a Newly Planted Crop by setting StartingRatoonNo = 0. Sugarcane will keep ratooning indefinitely until it is stopped by using an EndCrop or KillCrop. NB. All Ratoons are treated the same. No difference between first ratoon and second, third etc.*
stage_is_between	bool stage_is_between(int32 start_ob, int32 finish_ob, double current_stage) *Stage_is_betweens the specified start_ob.*
temp_3hr	double temp_3hr(double i_tmax, double i_tmin, int32 i_period) *Temp_3hrs the specified i_tmax.*
u_bound	double u_bound(double A, double MaxVal) *U_bounds the specified a.*

2 CanopyEnergyBalanceInterceptionlayerType

A canopy energy balance type

3 Clock

The clock model is resonsible for controlling the daily timestep in APSIM. It keeps track of the simulation date and loops from the start date to the end date, publishing events that other models can subscribe to.

Properties (Outputs)

Name	Description	Unit	Type	Settable?
End	The end date of the simulation.		nullable	True

Name	Description	Unit	Type	Settable?
EndDate	Gets or sets the end date for the simulation. If the user did not not provide a end date, attempt to locate a weather file and use its end date. If no weather file can be found, throw an exception.		datetime	True
FractionComplete	Returns the current fraction of the overall simulation which has been completed		double	False
Start	The start date of the simulation.		nullable	True
StartDate	Gets the start date for the simulation. If the user did not not provide a start date, attempt to locate a weather file and use its start date. If no weather file can be found, throw an exception.		datetime	True
Today	Gets the today.		datetime	True

Links (Dependencies)

Name	Type	IsOptional?
Summary	ISummary	False

Events published

Name	Type
CLEMAgeResources	Void CLEMAgeResources (Object sender, EventArgs e)
CLEMAnimalBreeding	Void CLEMAnimalBreeding (Object sender, EventArgs e)
CLEMAnimalBuy	Void CLEMAnimalBuy (Object sender, EventArgs e)
CLEMAnimalDeath	Void CLEMAnimalDeath (Object sender, EventArgs e)
CLEMAnimalManage	Void CLEMAnimalManage (Object sender, EventArgs e)
CLEMAnimalMark	Void CLEMAnimalMark (Object sender, EventArgs e)
CLEMAnimalMilking	Void CLEMAnimalMilking (Object sender, EventArgs e)
CLEMAnimalMilkProduction	Void CLEMAnimalMilkProduction (Object sender, EventArgs e)

Name	Type
CLEMAnimalSell	Void CLEMAnimalSell (Object sender, EventArgs e)
CLEMAnimalStock	Void CLEMAnimalStock (Object sender, EventArgs e)
CLEMAnimalWeightGain	Void CLEMAnimalWeightGain (Object sender, EventArgs e)
CLEMCalculateEcologicalState	Void CLEMCalculateEcologicalState (Object sender, EventArgs e)
CLEMCalculateManure	Void CLEMCalculateManure (Object sender, EventArgs e)
CLEMCollectManure	Void CLEMCollectManure (Object sender, EventArgs e)
CLEMDetachPasture	Void CLEMDetachPasture (Object sender, EventArgs e)
CLEMDoCutAndCarry	Void CLEMDoCutAndCarry (Object sender, EventArgs e)
CLEMEndOfTimeStep	Void CLEMEndOfTimeStep (Object sender, EventArgs e)
CLEMFinalizeTimeStep	Void CLEMFinalizeTimeStep (Object sender, EventArgs e)
CLEMGetResourcesRequired	Void CLEMGetResourcesRequired (Object sender, EventArgs e)
CLEMHerdSummary	Void CLEMHerdSummary (Object sender, EventArgs e)
CLEMInitialiseActivity	Void CLEMInitialiseActivity (Object sender, EventArgs e)
CLEMInitialiseResource	Void CLEMInitialiseResource (Object sender, EventArgs e)
CLEMPastureReady	Void CLEMPastureReady (Object sender, EventArgs e)
CLEMPotentialIntake	Void CLEMPotentialIntake (Object sender, EventArgs e)
CLEMStartOfTimeStep	Void CLEMStartOfTimeStep (Object sender, EventArgs e)
CLEMUpdateLabourAvailability	Void CLEMUpdateLabourAvailability (Object sender, EventArgs e)
CLEMUpdatePasture	Void CLEMUpdatePasture (Object sender, EventArgs e)
CLEMValidate	Void CLEMValidate (Object sender, EventArgs e)
DoActualPlantGrowth	Void DoActualPlantGrowth (Object sender, EventArgs e)

Name	Type
DoActualPlantPartioning	Void DoActualPlantPartioning (Object sender, EventArgs e)
DoDailyInitialisation	Void DoDailyInitialisation (Object sender, EventArgs e)
DoEnergyArbitration	Void DoEnergyArbitration (Object sender, EventArgs e)
DoInitialSummary	Void DoInitialSummary (Object sender, EventArgs e)
DoLifecycle	Void DoLifecycle (Object sender, EventArgs e)
DoManagement	Void DoManagement (Object sender, EventArgs e)
DoManagementCalculations	Void DoManagementCalculations (Object sender, EventArgs e)
DoNutrientArbitration	Void DoNutrientArbitration (Object sender, EventArgs e)
DoPestDiseaseDamage	Void DoPestDiseaseDamage (Object sender, EventArgs e)
DoPhenology	Void DoPhenology (Object sender, EventArgs e)
DoPotentialPlantGrowth	Void DoPotentialPlantGrowth (Object sender, EventArgs e)
DoPotentialPlantPartioning	Void DoPotentialPlantPartioning (Object sender, EventArgs e)
DoReport	Void DoReport (Object sender, EventArgs e)
DoReportCalculations	Void DoReportCalculations (Object sender, EventArgs e)
DoSoilOrganicMatter	Void DoSoilOrganicMatter (Object sender, EventArgs e)
DoSoilTemperature	Void DoSoilTemperature (Object sender, EventArgs e)
DoSoilWaterMovement	Void DoSoilWaterMovement (Object sender, EventArgs e)
DoStock	Void DoStock (Object sender, EventArgs e)
DoSurfaceOrganicMatterDecomposition	Void DoSurfaceOrganicMatterDecomposition (Object sender, EventArgs e)
DoUpdate	Void DoUpdate (Object sender, EventArgs e)
DoUpdateWaterDemand	Void DoUpdateWaterDemand (Object sender, EventArgs e)
DoWaterArbitration	Void DoWaterArbitration (Object sender, EventArgs e)

Name	Type
DoWeather	Void DoWeather (Object sender, EventArgs e)
EndOfDay	Void EndOfDay (Object sender, EventArgs e)
EndOfMonth	Void EndOfMonth (Object sender, EventArgs e)
EndOfSimulation	Void EndOfSimulation (Object sender, EventArgs e)
EndOfWeek	Void EndOfWeek (Object sender, EventArgs e)
EndOfYear	Void EndOfYear (Object sender, EventArgs e)
FinalInitialise	Void FinalInitialise (Object sender, EventArgs e)
PrePhenology	Void PrePhenology (Object sender, EventArgs e)
StartOfDay	Void StartOfDay (Object sender, EventArgs e)
StartOfMonth	Void StartOfMonth (Object sender, EventArgs e)
StartOfSimulation	Void StartOfSimulation (Object sender, EventArgs e)
StartOfWeek	Void StartOfWeek (Object sender, EventArgs e)
StartOfYear	Void StartOfYear (Object sender, EventArgs e)

4 Soil

The soil class encapsulates a soil characterisation and 0 or more soil samples. the methods in this class that return double[[]] always return using the "Standard layer structure" i.e. the layer structure as defined by the Water child object. method. Mapping will occur to achieve this if necessary. To obtain the "raw", unmapped, values use the child classes e.g. SoilWater, Analysis and Sample.

Properties (Outputs)

Name	Description	Units	Type	Settable?
ApsoilNumber	Gets or sets the apsoil number.		String	True
ASCOrder	Gets or sets the asc order.		String	True
ASCSubOrder	Gets or sets the asc sub order.		String	True
Comments	Gets or sets the comments.		String	True
Country	Gets or sets the country.		String	True

Name	Description	Units	Type	Settable?
DataSource	Gets or sets the data source.		String	True
Latitude	Gets or sets the latitude.		double	True
LocalName	Gets or sets the name of the local.		String	True
LocationAccuracy	Gets or sets the location accuracy.		String	True
Longitude	Gets or sets the longitude.		double	True
NaturalVegetation	Gets or sets the natural vegetation.		String	True
NearestTown	Gets or sets the nearest town.		String	True
RecordNumber	Gets or sets the record number.		int32	True
Region	Gets or sets the region.		String	True
Site	Gets or sets the site.		String	True
SoilType	Gets or sets the type of the soil.		String	True
State	Gets or sets the state.		String	True
YearOfSampling	Gets or sets the year of sampling.		String	True

5 BiomassRemovedType

6 FOMLayerType

FOMLayerType

7 SoilState

Encapsulates the state of water and N in multiple zones.

Properties (Outputs)

Name	Description	Units	Type	Settable?
Zones	Gets all zones in this soil state.		List<ZoneWaterAndN>	True

Methods (callable from manager)

Name	Description
Initialise	void Initialise()

8 ZoneWaterAndN

Represents a zone (point, field etc) that has water and N values.

Properties (Outputs)

Name	Description	Units	Type	Settable?
TotalNO3N	Gets the sum of 'NO3N' (mm)		double	False
TotalWater	Gets the sum of 'Water' (mm)		double	False
Zone	The Zone for this water and N		Zone	True

Methods (callable from manager)

Name	Description
Initialise	void Initialise()
InitialiseToSoilState	void InitialiseToSoilState()