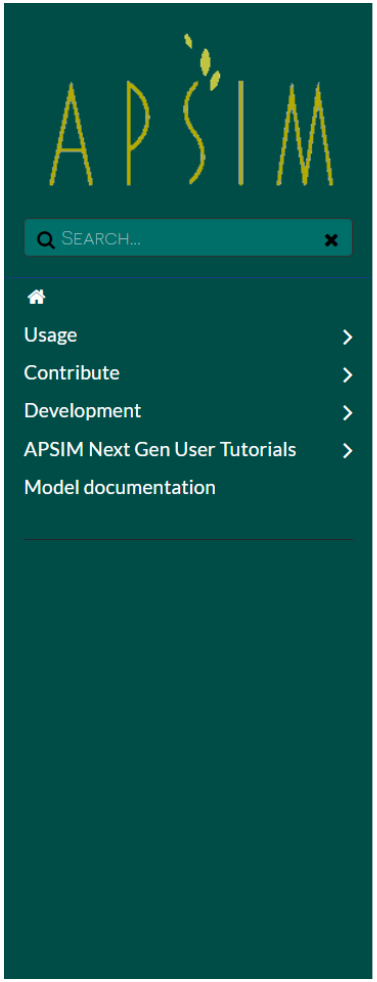
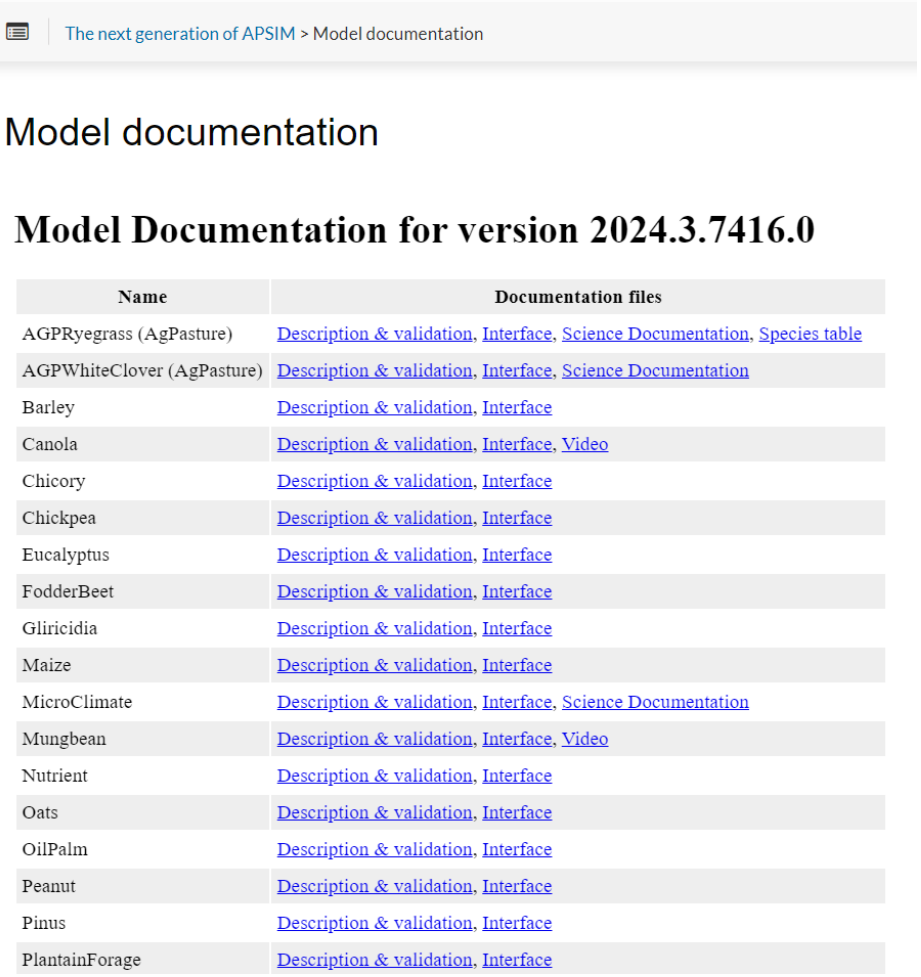
This is the collection of screenshots associated with the exercises described in the file *APSIMForPlantationForestryInstructionsExercises.* The screenshots are number by exercise part. However, screenshots are not available for every step of every exercise.

You might not exactly create the values and colours in graphs as shown, but the main aim is to build, run and graph simulations successfully, i.e. the simulations should run as planned and without error messages.

Contact Philip if something is unclear (+61 409 242 677, Philip.Smethurst@csiro.au)) and if you have suggestions for improving these training instructions.

1c.





Name	Documentation files
AGPRyegrass (AgPasture)	Description & validation, Interface, Science Documentation, Species table
AGPWhiteClover (AgPasture)	Description & validation, Interface, Science Documentation
Barley	Description & validation, Interface
Canola	Description & validation, Interface, Video
Chicory	Description & validation, Interface
Chickpea	Description & validation, Interface
Eucalyptus	Description & validation, Interface
FodderBeet	Description & validation, Interface
Gliricidia	Description & validation, Interface
Maize	Description & validation, Interface
MicroClimate	Description & validation, Interface, Science Documentation
Mungbean	Description & validation, Interface, Video
Nutrient	Description & validation, Interface
Oats	Description & validation, Interface
OilPalm	Description & validation, Interface
Peanut	Description & validation, Interface
Pinus	Description & validation, Interface
PlantainForage	Description & validation, Interface

1d.

Soils and soil parameters in APSIM Next Generation

APSIM Next Generation: irrigating and fertilizing the crop

Crop growth in APSIM: understanding water and nitrogen stresses

Pasture growth and livestock grazing in APSIM

Crops and livestock in APSIM (Crop Livestock Enterprise Model)

Trees and crops in APSIM Next Generation (Agroforestry)

Understanding APSIM Next Generation weather (meteorology) data

APSIM Next Generation: model structure and genotype parameters

Nitrogen fertilizer, soil N, N loss and cycling in APSIM Next Generation

Climate change in APSIM Next Generation (climate controller)

APSIM Next Generation, with examples from Eucalyptus plantation forestry

Video 1/4 Brief tour of website, GUI, GitHub and Eucalyptus Rotation example

Video 2/4 Running the Eucalyptus Rotation example, and Eucalyptus model structure

Video 3/4 – Genotypes and other components of the Eucalyptus model

Video 4/4 – Soil, Weather, Experiments, Calibration

3c.

APSIM Initiative Product Registration

Product:	APSIM Next Generation
Version:	2024.03.7419.0
Platform:	Windows
First Name:	Philip
Last Name:	Smethurst
Organisation:	Private
Country:	Australia
Email:	pjsmethurst@gmail.com
Licence Type:	General Use

The Organisation field is required.

☑ The APSIM Initiative will forward updates on APSIM-related developments and improvements as well as the upcoming APSIM-related events including training workshops.

I agree to the T&Cs below. Proceed to Downloads

SCHEDULE 4 - GENERAL USE LICENCE

GENERAL USE LICENCE AGREEMENT FOR AGRICULTURAL PRODUCTION SYSTEMS SIMULATOR (APSIM)

The Licensee must carefully read all the terms and conditions of this Agreement before downloading the APSIM Software. The terms and conditions of this Agreement are legally binding. Download of the APSIM Software indicates the Licensee's acceptance of these terms and conditions. The licence granted under this Agreement is only given on the Licensee's acceptance of these terms and conditions and will be subject to the Licensee's continual compliance with them. If the Licensee does not agree to these terms and conditions they must not download, install or use the APSIM Software.

This Agreement is effective and commences on and from the date of download of the APSIM Software.

APSIM Downloads

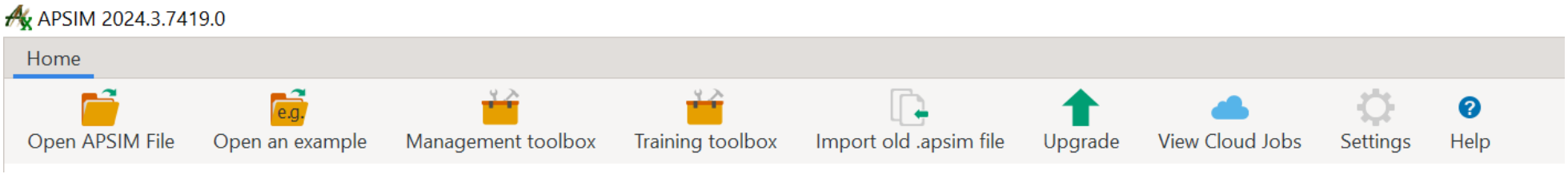
Product: APSIM Next Generation

Release Date	Release Number	Release Information	Download Link
2024-03-06	2024.03.7419.0	Input string format error from graph presenter	Windows , MacOS , Linux
2024-03-06	2024.03.7418.0	Wrong Cursor on XY Pairs	Windows , MacOS , Linux
2024-03-06	2024.03.7417.0	Water Presenter 'Filled from top?' checkbox not working correctly	Windows , MacOS , Linux
2024-03-06	2024.03.7416.0	Object reference not set to an instance of an object.	Windows , MacOS , Linux
2024-03-04	2024.03.7415.0	Index was outside the bounds of the array	Windows , MacOS , Linux
2024-03-04	2024.03.7414.0	(Re)create apsfarm capability	Windows , MacOS , Linux
2024-03-03	2024.03.7413.0	:bug: edit-use-config and run-use-config options not following config file	Windows , MacOS , Linux
2024-03-01	2024.03.7412.0	Zadok Stage on day of sowing is 4.9	Windows , MacOS , Linux
2024-03-01	2024.03.7411.0	Templates lost tags	Windows , MacOS , Linux
2024-02-29	2024.02.7410.0	Lincoln9192 SpecificArea values in observed wheat validation in wrong units	Windows , MacOS , Linux

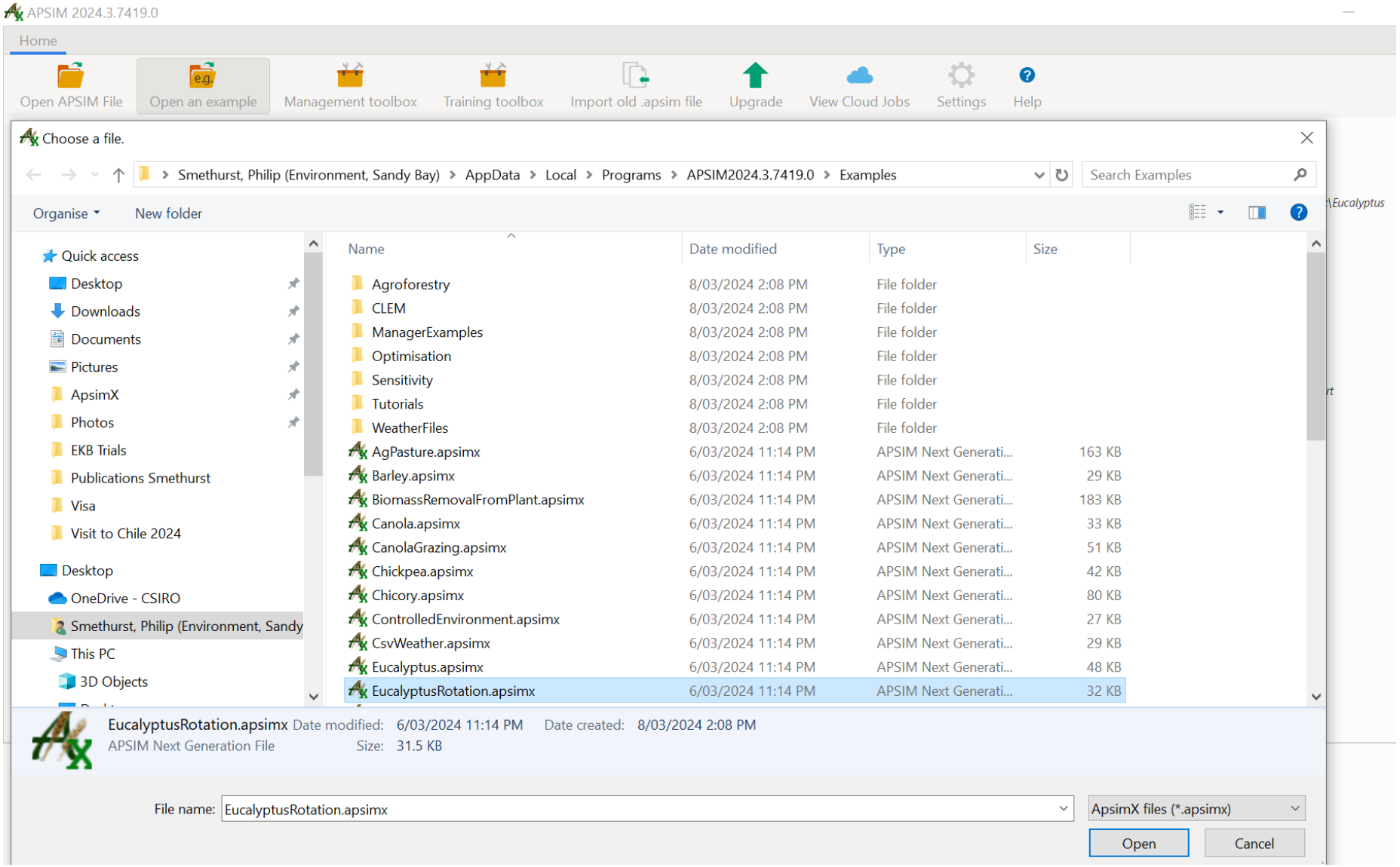
Max number of rows: 10 Go

You currently have a General Use license for APSIM. If you are using APSIM commercially, you will need to register again.

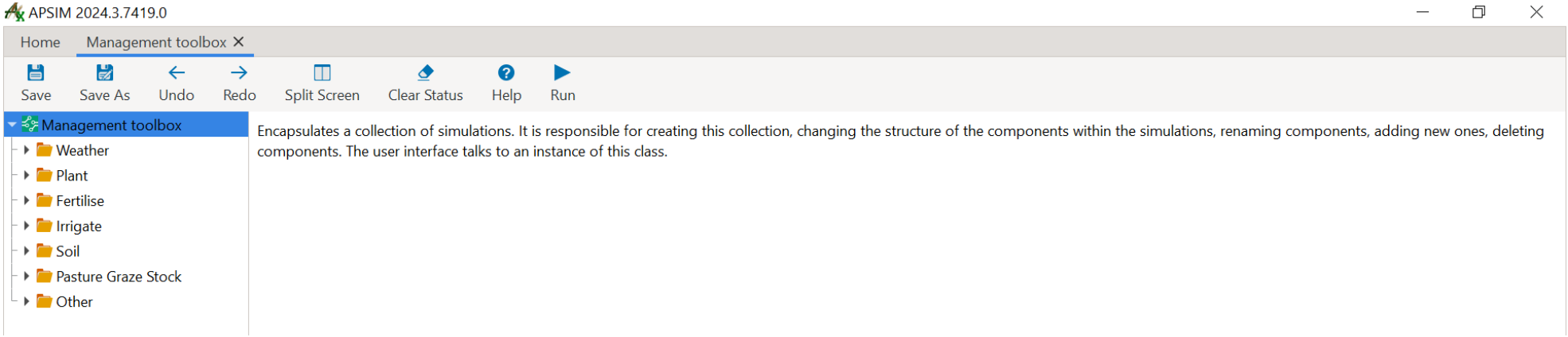
3j.

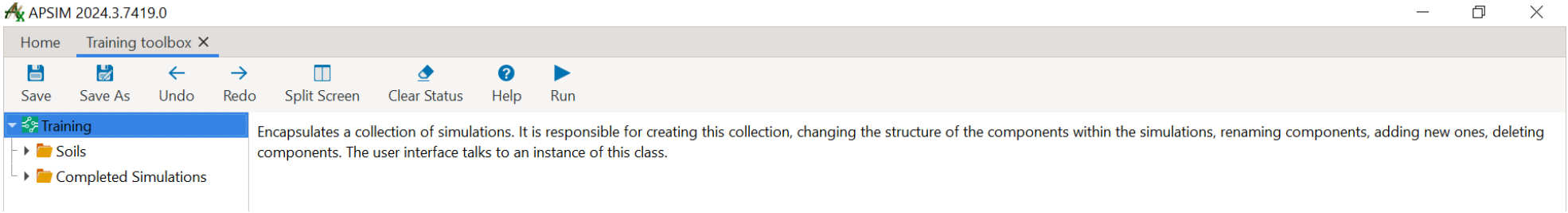


4a.

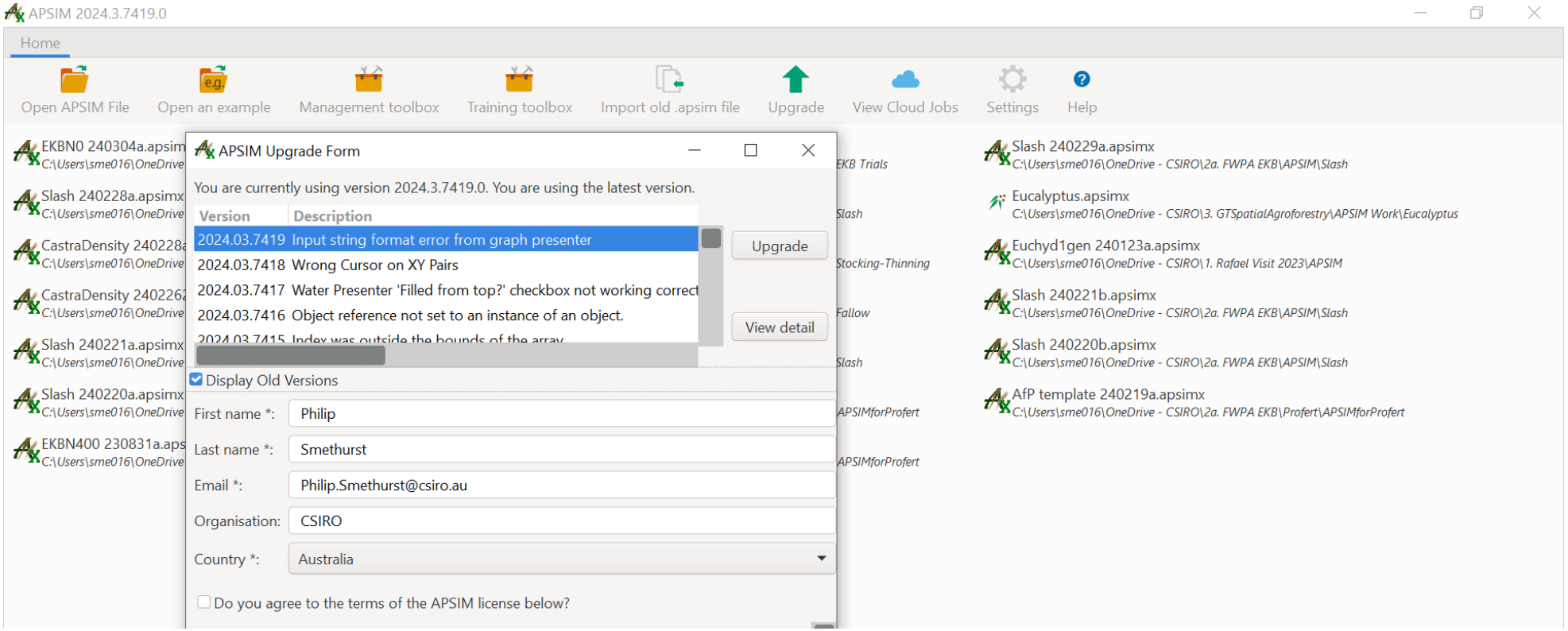

APSIM 2024.3.7419.0
Home
Open APSIM File
Open an example
Management toolbox
Training toolbox
Import old .apsim file
Upgrade
View Cloud Jobs
Settings
Help
Choose a file.
Smethurst, Philip (Environment, Sandy Bay) › AppData › Local › Programs › APSIM2024.3.7419.0 › Examples
Search Examples
Organise
New folder
Quick access
Desktop
Downloads
Documents
Pictures
ApsimX
Photos
EKB Trials
Publications Smethurst
Visa
Visit to Chile 2024
Desktop
OneDrive - CSIRO
Smethurst, Philip (Environment, Sandy
This PC
3D Objects
Name
Date modified
Type
Size
Agroforestry 8/03/2024 2:08 PM File folder
CLEM 8/03/2024 2:08 PM File folder
ManagerExamples 8/03/2024 2:08 PM File folder
Optimisation 8/03/2024 2:08 PM File folder
Sensitivity 8/03/2024 2:08 PM File folder
Tutorials 8/03/2024 2:08 PM File folder
WeatherFiles 8/03/2024 2:08 PM File folder
AgPasture.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 163 KB
Barley.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 29 KB
BiomassRemovalFromPlant.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 183 KB
Canola.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 33 KB
CanolaGrazing.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 51 KB
Chickpea.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 42 KB
Chicory.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 80 KB
ControlledEnvironment.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 27 KB
CsvWeather.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 29 KB
Eucalyptus.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 48 KB
EucalyptusRotation.apsimx 6/03/2024 11:14 PM APSIM Next Generati... 32 KB
EucalyptusRotation.apsimx Date modified: 6/03/2024 11:14 PM Date created: 8/03/2024 2:08 PM
APSIM Next Generation File Size: 31.5 KB
File name: EucalyptusRotation.apsimx
ApsimX files (*.apsimx)
Open
Cancel

4a (continued)

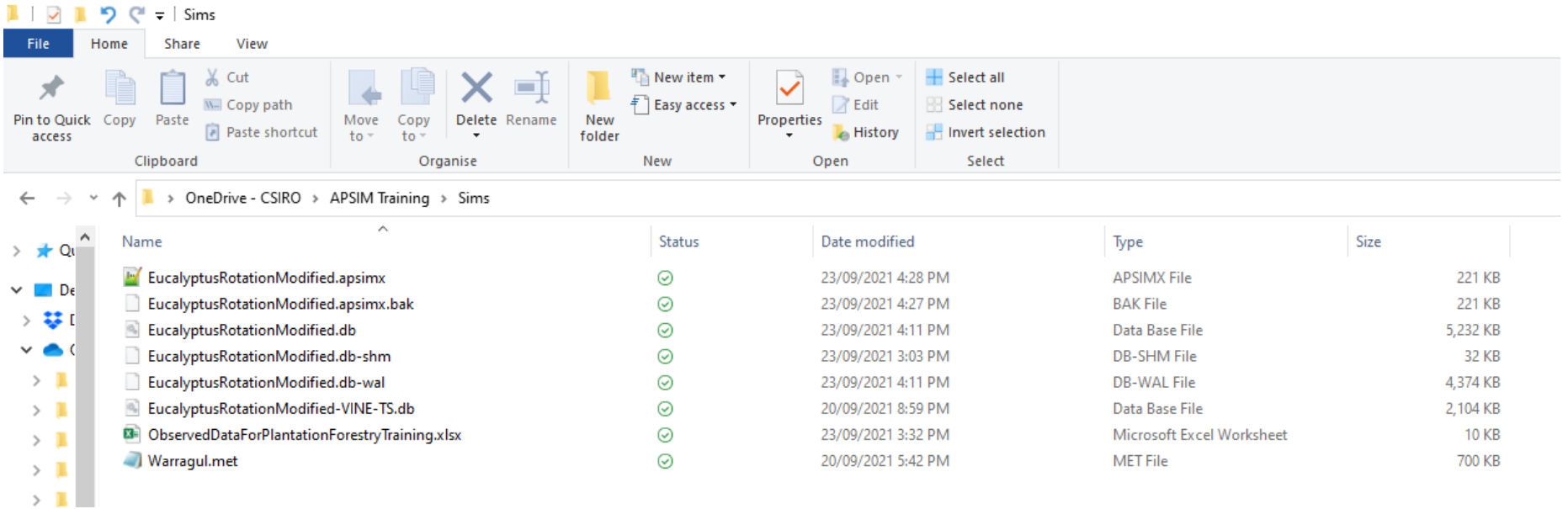




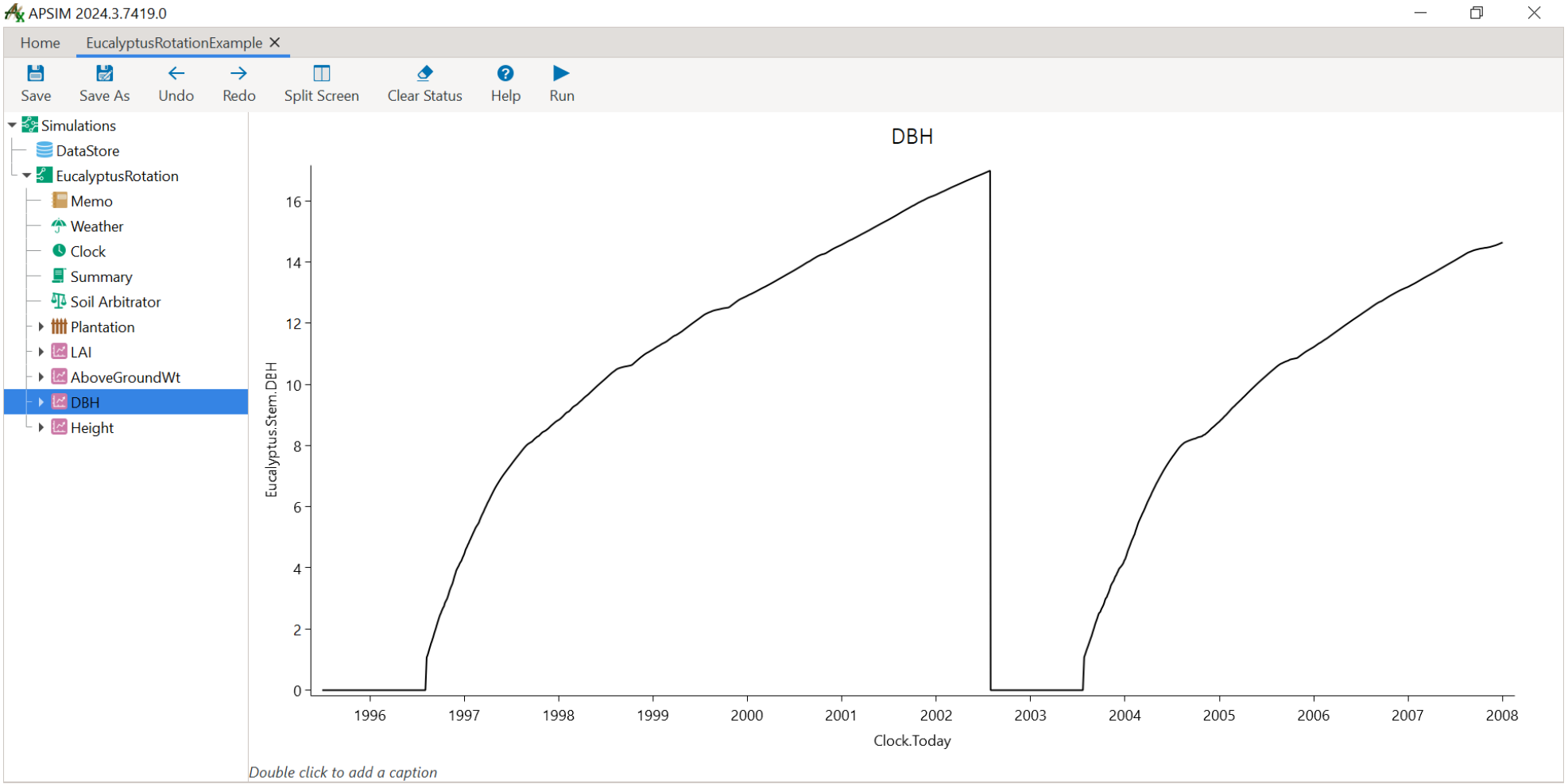
4a (continued)



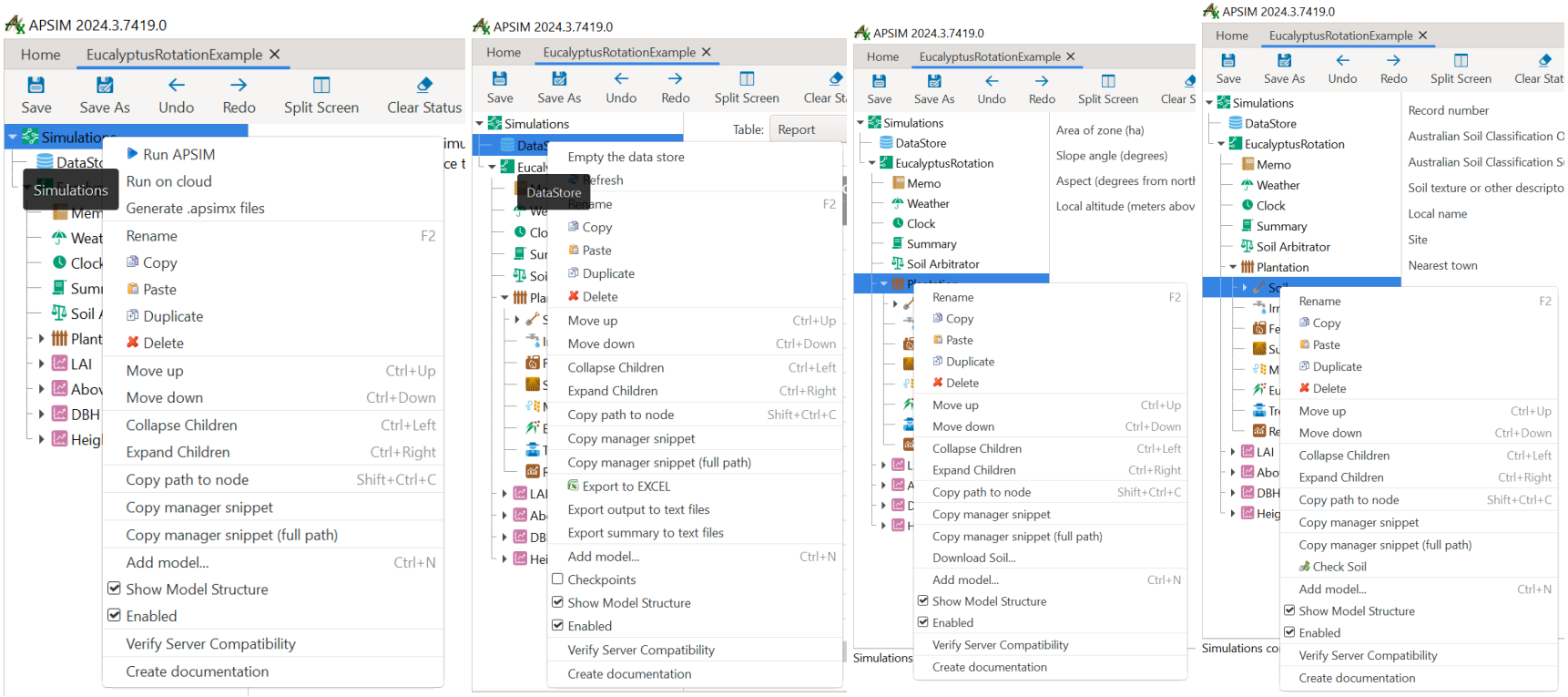
5a-e.


Sims
File
Home
Share
View
Pin to Quick access
Copy
Paste
Cut
Copy path
Paste shortcut
Clipboard
Move to
Copy to
Delete
Rename
Organise
New folder
New item
Easy access
New
Properties
Open
Edit
History
Open
Select all
Select none
Invert selection
Select
OneDrive - CSIRO › APSIM Training › Sims
Name
Status
Date modified
Type
Size
EucalyptusRotationModified.apsimx 23/09/2021 4:28 PM APSIMX File 221 KB
EucalyptusRotationModified.apsimx.bak 23/09/2021 4:27 PM BAK File 221 KB
EucalyptusRotationModified.db 23/09/2021 4:11 PM Data Base File 5,232 KB
EucalyptusRotationModified.db-shm 23/09/2021 3:03 PM DB-SHM File 32 KB
EucalyptusRotationModified.db-wal 23/09/2021 4:11 PM DB-WAL File 4,374 KB
EucalyptusRotationModified-VINE-TS.db 20/09/2021 8:59 PM Data Base File 2,104 KB
ObservedDataForPlantationForestryTraining.xlsx 23/09/2021 3:32 PM Microsoft Excel Worksheet 10 KB
Warragul.met 20/09/2021 5:42 PM MET File 700 KB

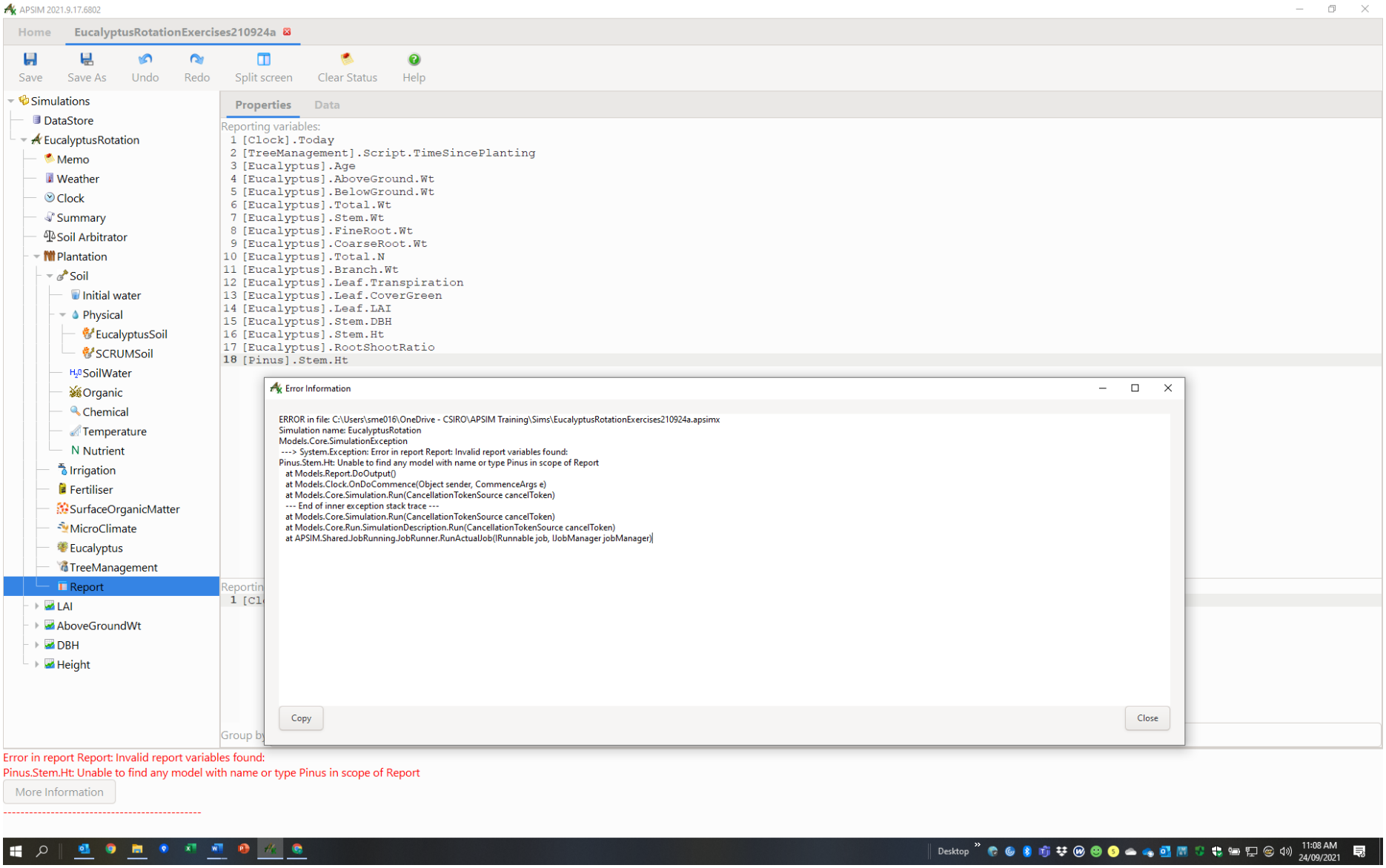
6a-e.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
DataStore
EucalyptusRotation
Memo
Weather
Clock
Summary
Soil Arbitrator
Plantation
LAI
AboveGroundWt
DBH
Height
DBH
Eucalyptus.Stem.DBH
0
2
4
6
8
10
12
14
16
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption

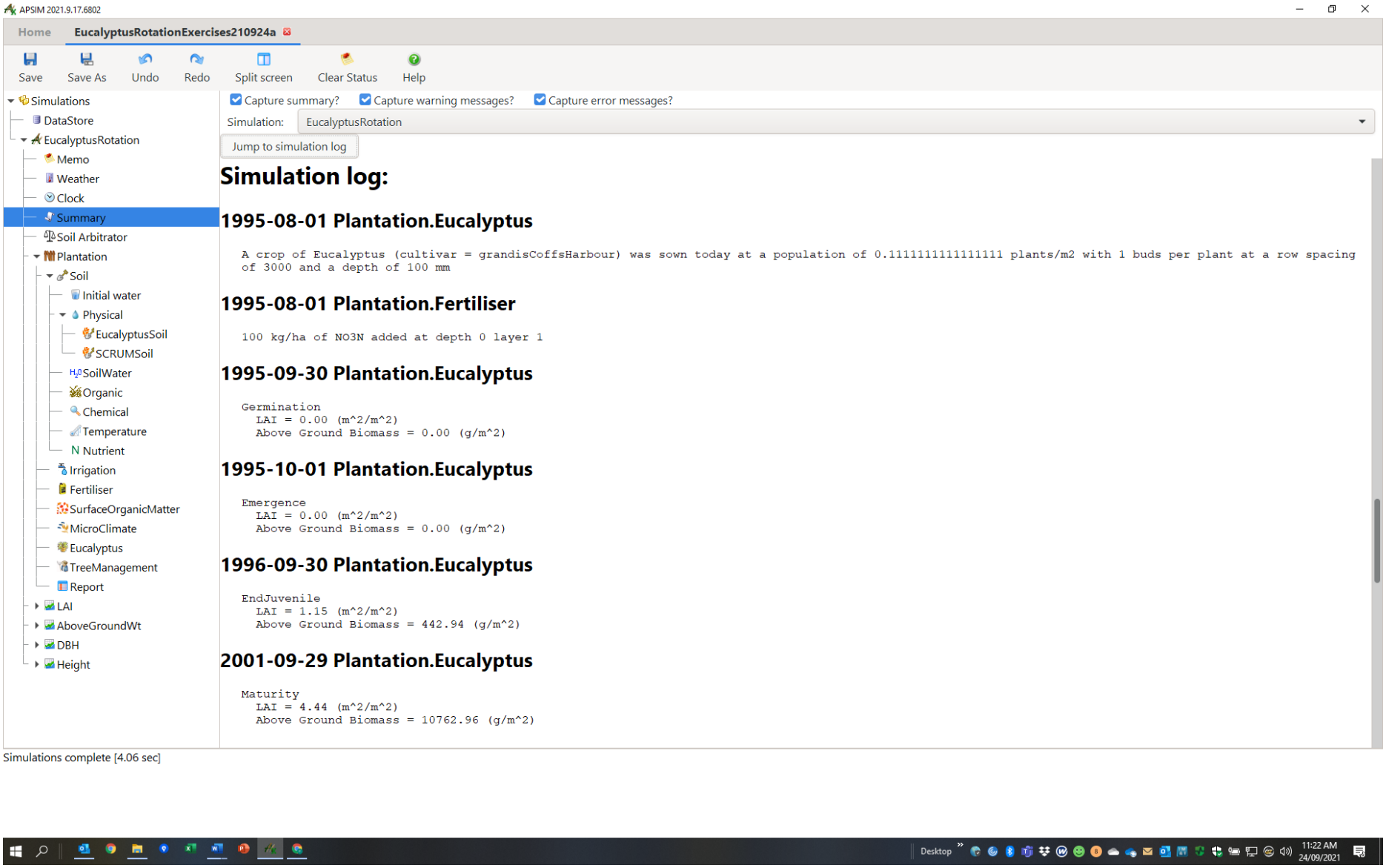
7a-b.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Simulations
DataStore
Run APSIM
Run on cloud
Generate .apsimx files
Rename F2
Copy
Paste
Duplicate
Delete
Move up Ctrl+Up
Move down Ctrl+Down
Collapse Children Ctrl+Left
Expand Children Ctrl+Right
Copy path to node Shift+Ctrl+C
Copy manager snippet
Copy manager snippet (full path)
Add model... Ctrl+N
Show Model Structure
Enabled
Verify Server Compatibility
Create documentation
Table: Report
Empty the data store
Refresh
Export to EXCEL
Export output to text files
Export summary to text files
Checkpoints
Area of zone (ha)
Slope angle (degrees)
Aspect (degrees from north)
Local altitude (meters above)
Download Soil...
Record number
Soil texture or other descripto
Local name
Site
Nearest town
Check Soil

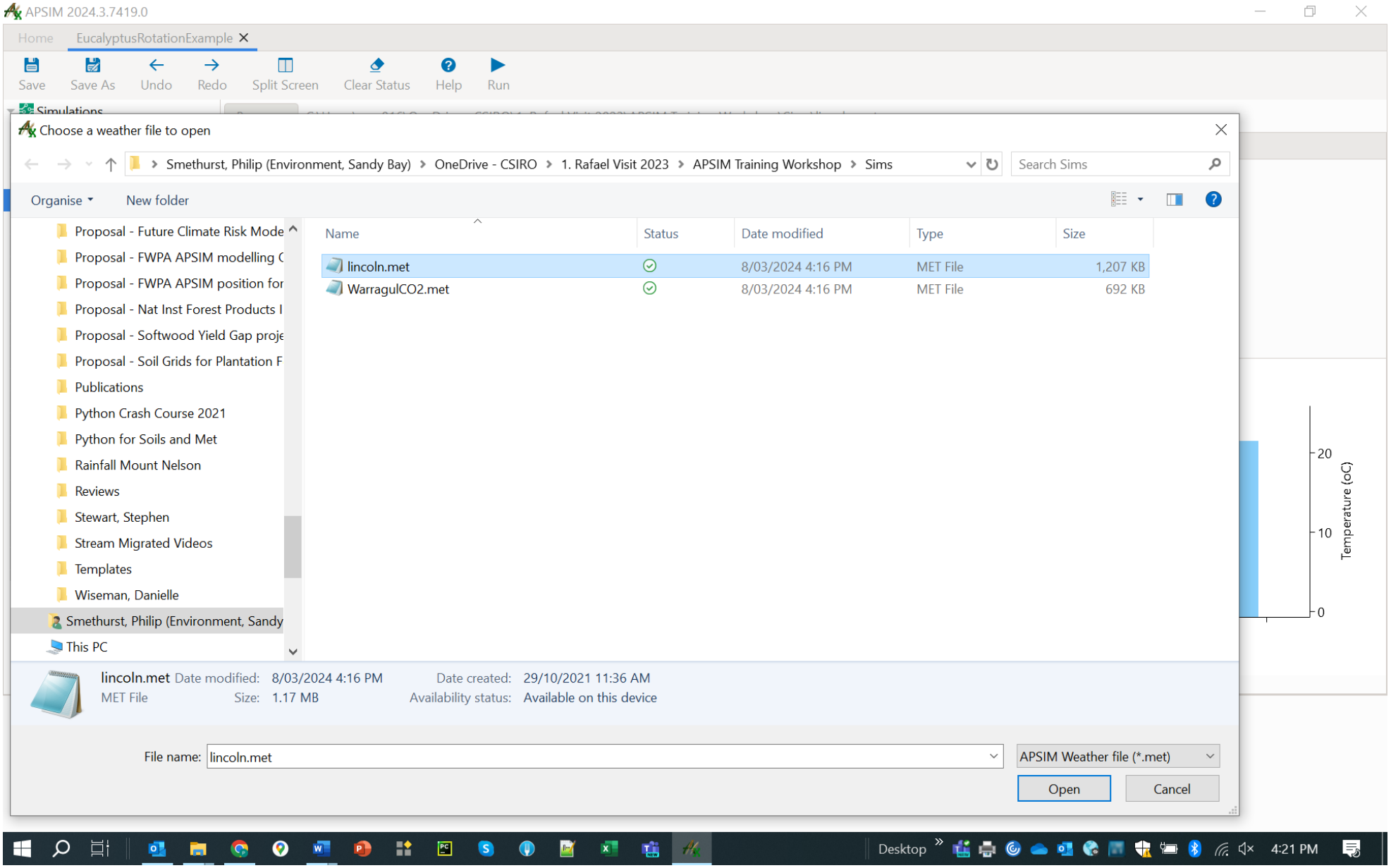
8c.

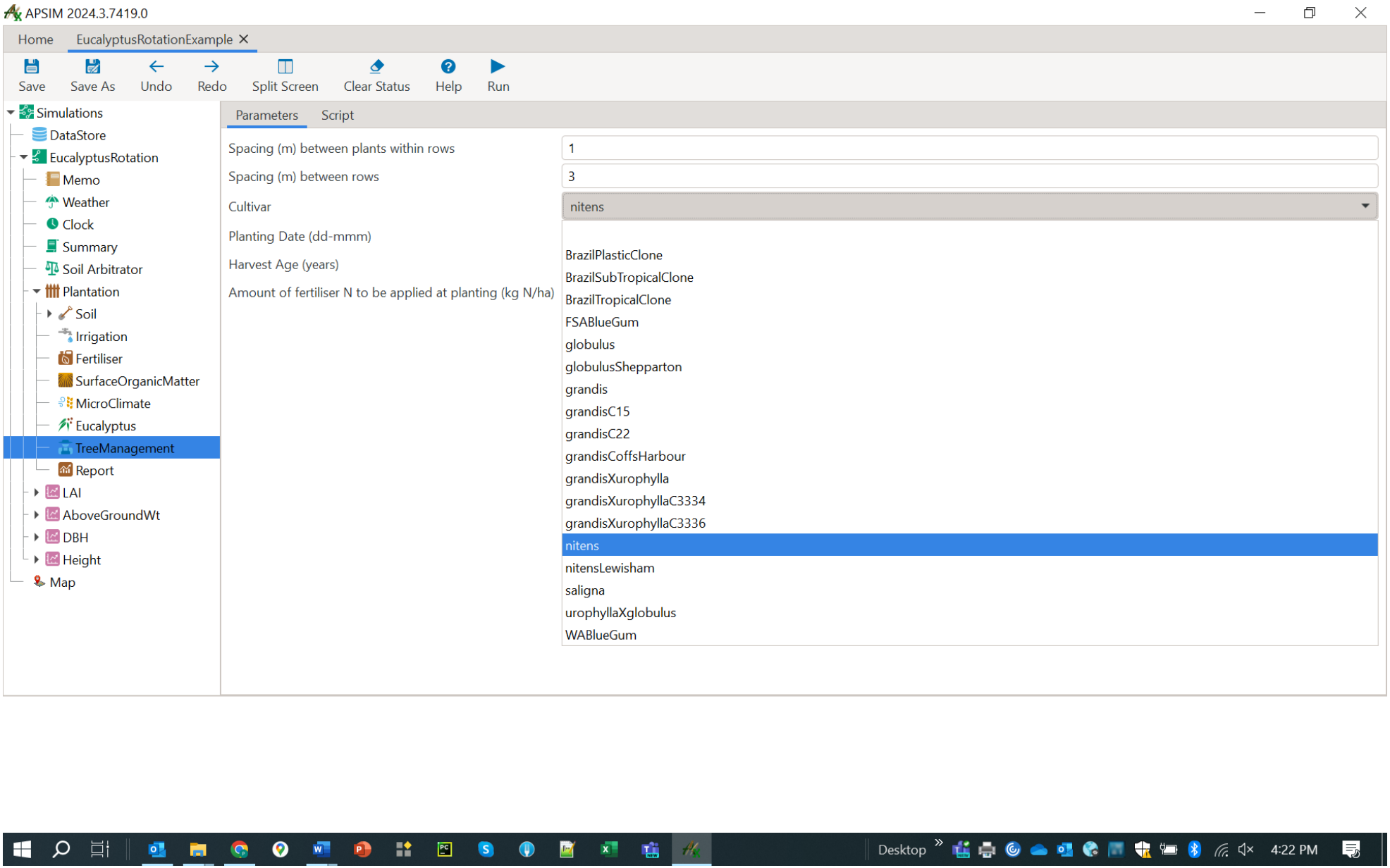

APSIM 2021.9.17.6802
Home
EucalyptusRotationExercises210924a
Save
Save As
Undo
Redo
Split screen
Clear Status
Help
Simulations
DataStore
EucalyptusRotation
Memo
Weather
Clock
Summary
Soil Arbitrator
Plantation
Soil
Initial water
Physical
EucalyptusSoil
SCRUMSoil
SoilWater
Organic
Chemical
Temperature
Nutrient
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
LAI
AboveGroundWt
DBH
Height
Properties
Data
Reporting variables:
1 [Clock].Today
2 [TreeManagement].Script.TimeSincePlanting
3 [Eucalyptus].Age
4 [Eucalyptus].AboveGround.Wt
5 [Eucalyptus].BelowGround.Wt
6 [Eucalyptus].Total.Wt
7 [Eucalyptus].Stem.Wt
8 [Eucalyptus].FineRoot.Wt
9 [Eucalyptus].CoarseRoot.Wt
10 [Eucalyptus].Total.N
11 [Eucalyptus].Branch.Wt
12 [Eucalyptus].Leaf.Transpiration
13 [Eucalyptus].Leaf.CoverGreen
14 [Eucalyptus].Leaf.LAI
15 [Eucalyptus].Stem.DBH
16 [Eucalyptus].Stem.Ht
17 [Eucalyptus].RootShootRatio
18 [Pinus].Stem.Ht
Error Information
ERROR in file: C:\Users\sme016\OneDrive - CSIRO\APSIM Training\Sims\EucalyptusRotationExercises210924a.apsimx
Simulation name: EucalyptusRotation
Models.Core.SimulationException
---> System.Exception: Error in report Report: Invalid report variables found:
Pinus.Stem.Ht: Unable to find any model with name or type Pinus in scope of Report
at Models.Report.DoOutput()
at Models.Clock.OnDoCommence(Object sender, CommenceArgs e)
at Models.Core.Simulation.Run(CancellationTokenSource cancelToken)
--- End of inner exception stack trace ---
at Models.Core.Simulation.Run(CancellationTokenSource cancelToken)
at Models.Core.Run.SimulationDescription.Run(CancellationTokenSource cancelToken)
at APSIM.Shared.JobRunning.JobRunner.RunActualJob(IRunnable job, IJobManager jobManager)
Copy
Close
Group by
Error in report Report: Invalid report variables found:
Pinus.Stem.Ht: Unable to find any model with name or type Pinus in scope of Report
More Information
Desktop
11:08 AM
24/09/2021

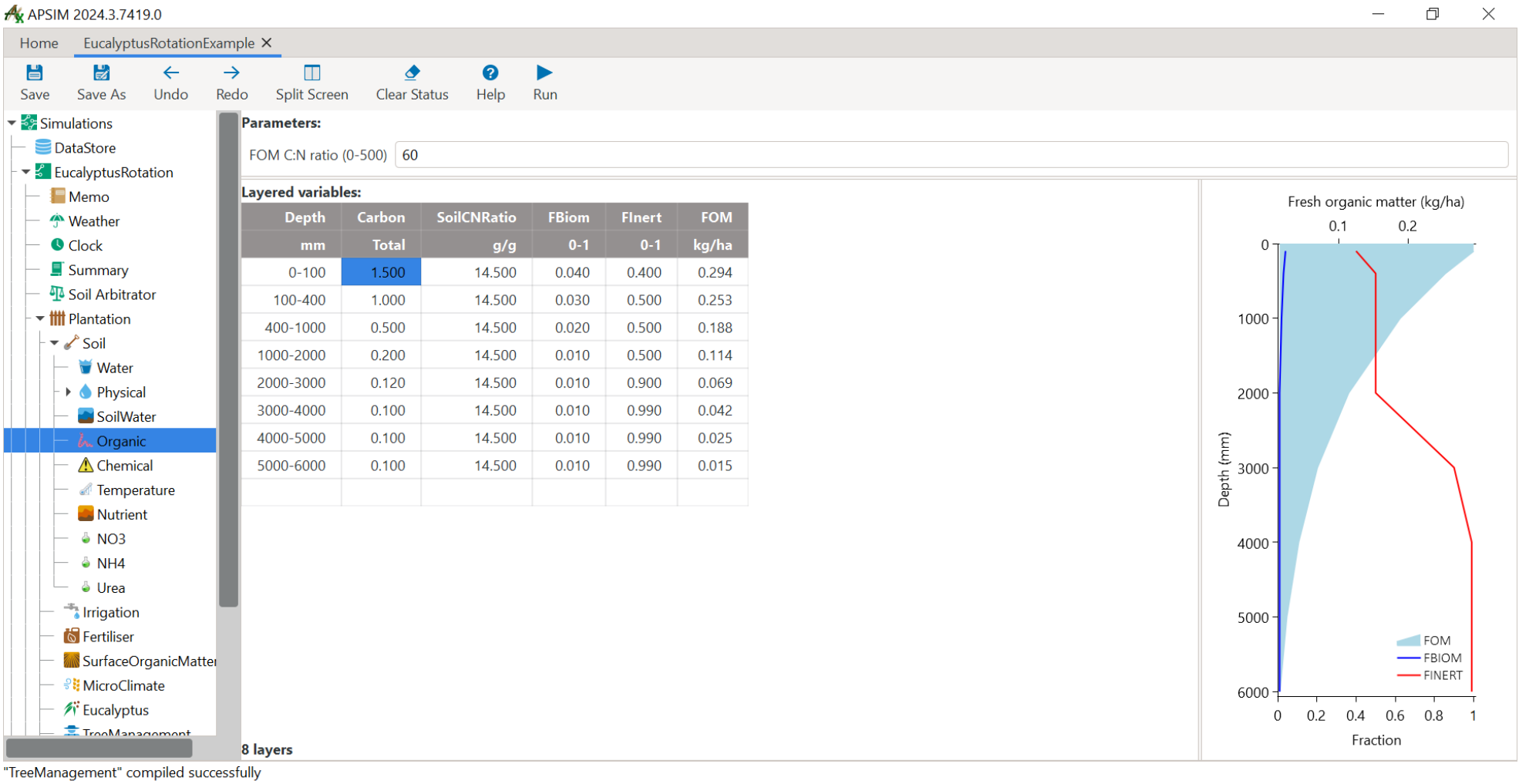
8e.

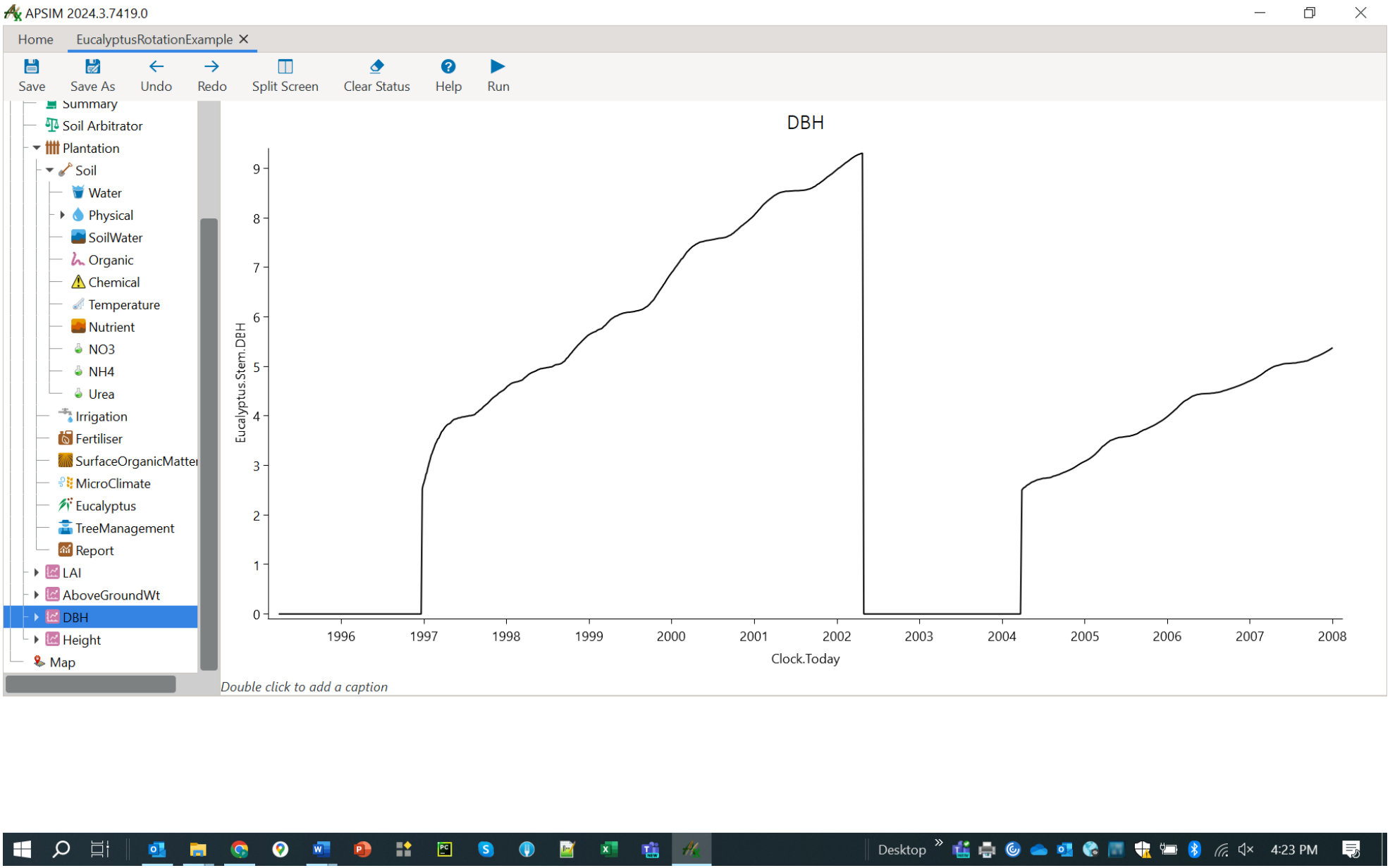

APSIM 2021.9.17.6802
Home
EucalyptusRotationExercises210924a
Save
Save As
Undo
Redo
Split screen
Clear Status
Help
Simulations
DataStore
EucalyptusRotation
Memo
Weather
Clock
Summary
Soil Arbitrator
Plantation
Soil
Initial water
Physical
EucalyptusSoil
SCRUMSoil
SoilWater
Organic
Chemical
Temperature
Nutrient
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
LAI
AboveGroundWt
DBH
Height
Capture summary?
Capture warning messages?
Capture error messages?
Simulation:
EucalyptusRotation
Jump to simulation log
Simulation log:
1995-08-01 Plantation.Eucalyptus
A crop of Eucalyptus (cultivar = grandisCoffsHarbour) was sown today at a population of 0.1111111111111111 plants/m2 with 1 buds per plant at a row spacing of 3000 and a depth of 100 mm
1995-08-01 Plantation.Fertiliser
100 kg/ha of NO3N added at depth 0 layer 1
1995-09-30 Plantation.Eucalyptus
Germination
LAI = 0.00 (m^2/m^2)
Above Ground Biomass = 0.00 (g/m^2)
1995-10-01 Plantation.Eucalyptus
Emergence
LAI = 0.00 (m^2/m^2)
Above Ground Biomass = 0.00 (g/m^2)
1996-09-30 Plantation.Eucalyptus
EndJuvenile
LAI = 1.15 (m^2/m^2)
Above Ground Biomass = 442.94 (g/m^2)
2001-09-29 Plantation.Eucalyptus
Maturity
LAI = 4.44 (m^2/m^2)
Above Ground Biomass = 10762.96 (g/m^2)
Simulations complete [4.06 sec]
Desktop
11:22 AM
24/09/2021

9. a-h


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
Choose a weather file to open
Smethurst, Philip (Environment, Sandy Bay) › OneDrive - CSIRO › 1. Rafael Visit 2023 › APSIM Training Workshop › Sims
Search Sims
Organise
New folder
Proposal - Future Climate Risk Mode
Proposal - FWPA APSIM modelling C
Proposal - FWPA APSIM position for
Proposal - Nat Inst Forest Products I
Proposal - Softwood Yield Gap proje
Proposal - Soil Grids for Plantation F
Publications
Python Crash Course 2021
Python for Soils and Met
Rainfall Mount Nelson
Reviews
Stewart, Stephen
Stream Migrated Videos
Templates
Wiseman, Danielle
Smethurst, Philip (Environment, Sandy
This PC
Name
Status
Date modified
Type
Size
lincoln.met
8/03/2024 4:16 PM
MET File
1,207 KB
WarragulCO2.met
8/03/2024 4:16 PM
MET File
692 KB
lincoln.met Date modified: 8/03/2024 4:16 PM
MET File
Size: 1.17 MB
Date created: 29/10/2021 11:36 AM
Availability status: Available on this device
File name: lincoln.met
APSIM Weather file (*.met)
Open
Cancel
20
10
0
Temperature (oC)
Desktop
4:21 PM


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
DataStore
EucalyptusRotation
Memo
Weather
Clock
Summary
Soil Arbitrator
Plantation
Soil
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
LAI
AboveGroundWt
DBH
Height
Map
Parameters
Script
Spacing (m) between plants within rows
1
Spacing (m) between rows
3
Cultivar
nitens
Planting Date (dd-mmm)
Harvest Age (years)
Amount of fertiliser N to be applied at planting (kg N/ha)
BrazilPlasticClone
BrazilSubTropicalClone
BrazilTropicalClone
FSABlueGum
globulus
globulusShepparton
grandis
grandisC15
grandisC22
grandisCoffsHarbour
grandisXurophylla
grandisXurophyllaC3334
grandisXurophyllaC3336
nitens
nitensLewisham
saligna
urophyllaXglobulus
WABlueGum
Desktop
4:22 PM


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
DataStore
EucalyptusRotation
Memo
Weather
Clock
Summary
Soil Arbitrator
Plantation
Soil
Water
Physical
SoilWater
Organic
Chemical
Temperature
Nutrient
NO3
NH4
Urea
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
Parameters:
FOM C:N ratio (0-500) 60
Layered variables:
Depth mm
Carbon Total
SoilCNRatio g/g
FBiom 0-1
FInert 0-1
FOM kg/ha
0-100 1.500 14.500 0.040 0.400 0.294
100-400 1.000 14.500 0.030 0.500 0.253
400-1000 0.500 14.500 0.020 0.500 0.188
1000-2000 0.200 14.500 0.010 0.500 0.114
2000-3000 0.120 14.500 0.010 0.900 0.069
3000-4000 0.100 14.500 0.010 0.990 0.042
4000-5000 0.100 14.500 0.010 0.990 0.025
5000-6000 0.100 14.500 0.010 0.990 0.015
8 layers
Fresh organic matter (kg/ha)
Depth (mm)
Fraction
FOM
FBIOM
FINERT
"TreeManagement" compiled successfully


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Summary
Soil Arbitrator
Plantation
Soil
Water
Physical
SoilWater
Organic
Chemical
Temperature
Nutrient
NO3
NH4
Urea
Irrigation
Fertiliser
SurfaceOrganicMatte
MicroClimate
Eucalyptus
TreeManagement
Report
LAI
AboveGroundWt
DBH
Height
Map
DBH
Eucalyptus.Stem.DBH
Clock.Today
0
1
2
3
4
5
6
7
8
9
1996
1997
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1999
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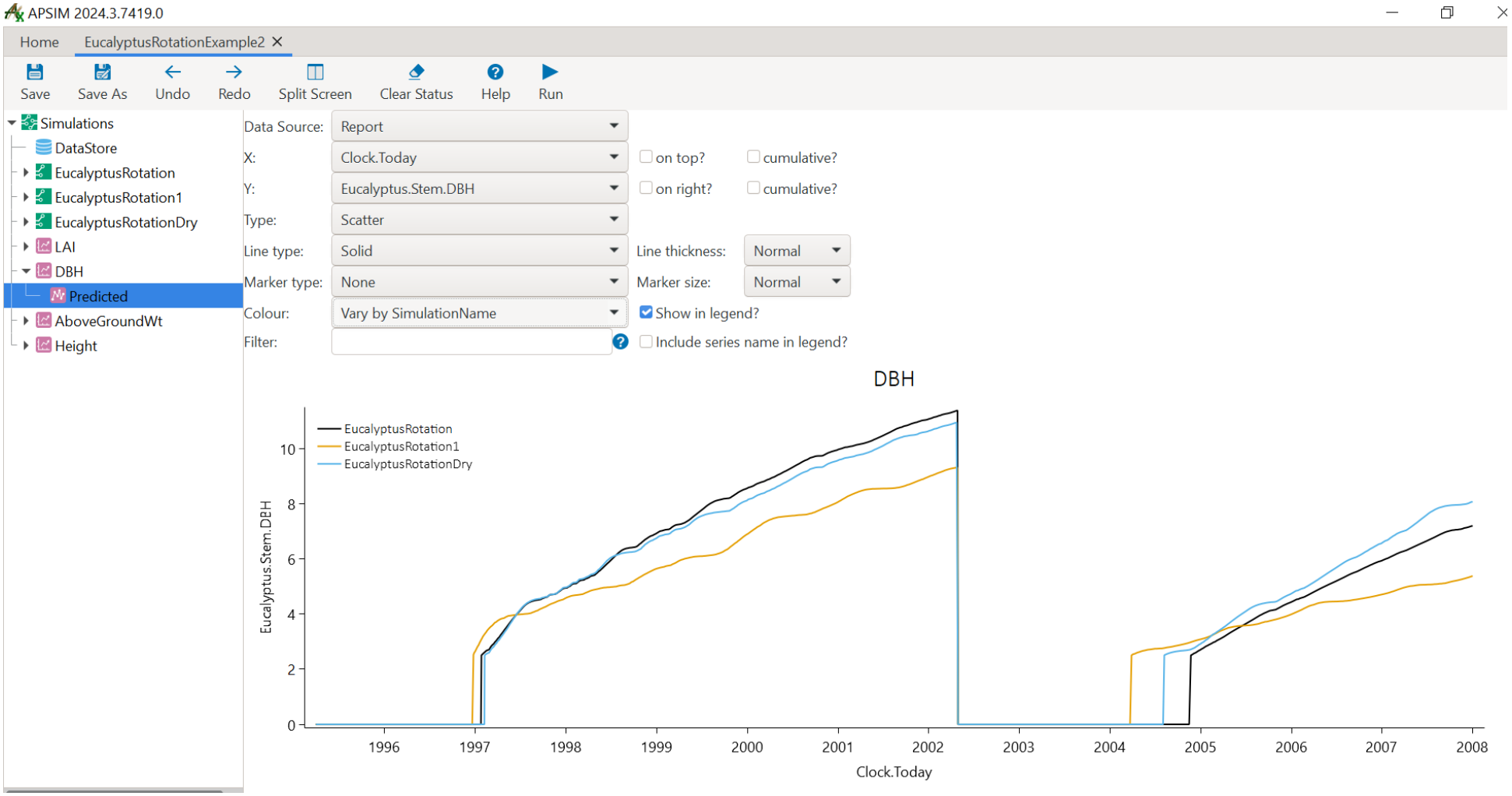
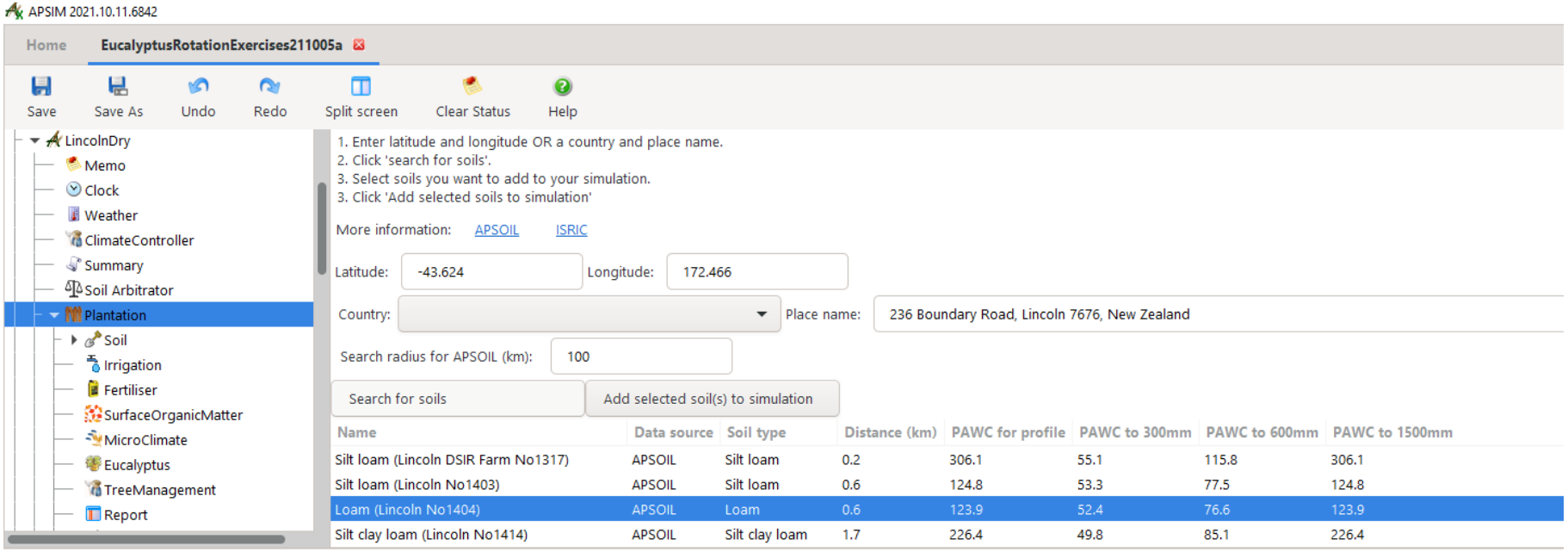
2003
2004
2005
2006
2007
2008
Double click to add a caption
Desktop
4:23 PM

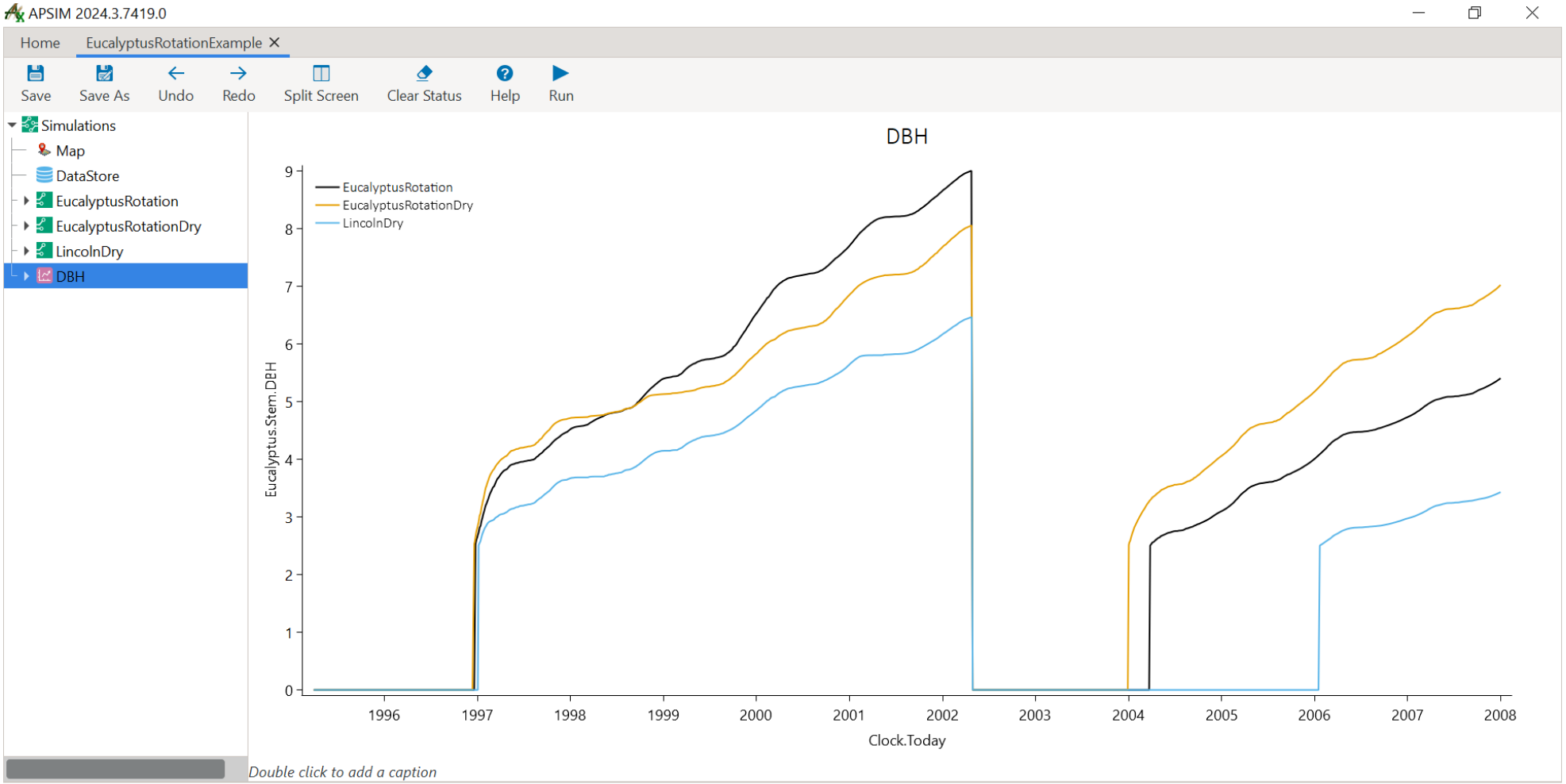
9. j-q


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample2
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
DataStore
EucalyptusRotation
EucalyptusRotation1
EucalyptusRotationDry
LAI
DBH
Predicted
AboveGroundWt
Height
Data Source: Report
X: Clock.Today
Y: Eucalyptus.Stem.DBH
Type: Scatter
Line type: Solid
Marker type: None
Colour: Vary by SimulationName
Filter:
on top?
cumulative?
on right?
cumulative?
Line thickness: Normal
Marker size: Normal
Show in legend?
Include series name in legend?
DBH
EucalyptusRotation
EucalyptusRotation1
EucalyptusRotationDry
Eucalyptus.Stem.DBH
Clock.Today
0
2
4
6
8
10
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

10e.


APSIM 2021.10.11.6842
Home
EucalyptusRotationExercises211005a
Save
Save As
Undo
Redo
Split screen
Clear Status
Help
LincolnDry
Memo
Clock
Weather
ClimateController
Summary
Soil Arbitrator
Plantation
Soil
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
1. Enter latitude and longitude OR a country and place name.
2. Click 'search for soils'.
3. Select soils you want to add to your simulation.
3. Click 'Add selected soils to simulation'
More information: APSOIL ISRIC
Latitude: -43.624
Longitude: 172.466
Country:
Place name: 236 Boundary Road, Lincoln 7676, New Zealand
Search radius for APSOIL (km): 100
Search for soils
Add selected soil(s) to simulation
Name | Data source | Soil type | Distance (km) | PAWC for profile | PAWC to 300mm | PAWC to 600mm | PAWC to 1500mm
Silt loam (Lincoln DSIR Farm No1317) | APSOIL | Silt loam | 0.2 | 306.1 | 55.1 | 115.8 | 306.1
Silt loam (Lincoln No1403) | APSOIL | Silt loam | 0.6 | 124.8 | 53.3 | 77.5 | 124.8
Loam (Lincoln No1404) | APSOIL | Loam | 0.6 | 123.9 | 52.4 | 76.6 | 123.9
Silt clay loam (Lincoln No1414) | APSOIL | Silt clay loam | 1.7 | 226.4 | 49.8 | 85.1 | 226.4

10j.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
Map
DataStore
EucalyptusRotation
EucalyptusRotationDry
LincolnDry
DBH
DBH
EucalyptusRotation
EucalyptusRotationDry
LincolnDry
Eucalyptus.Stem.DBH
0
1
2
3
4
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6
7
8
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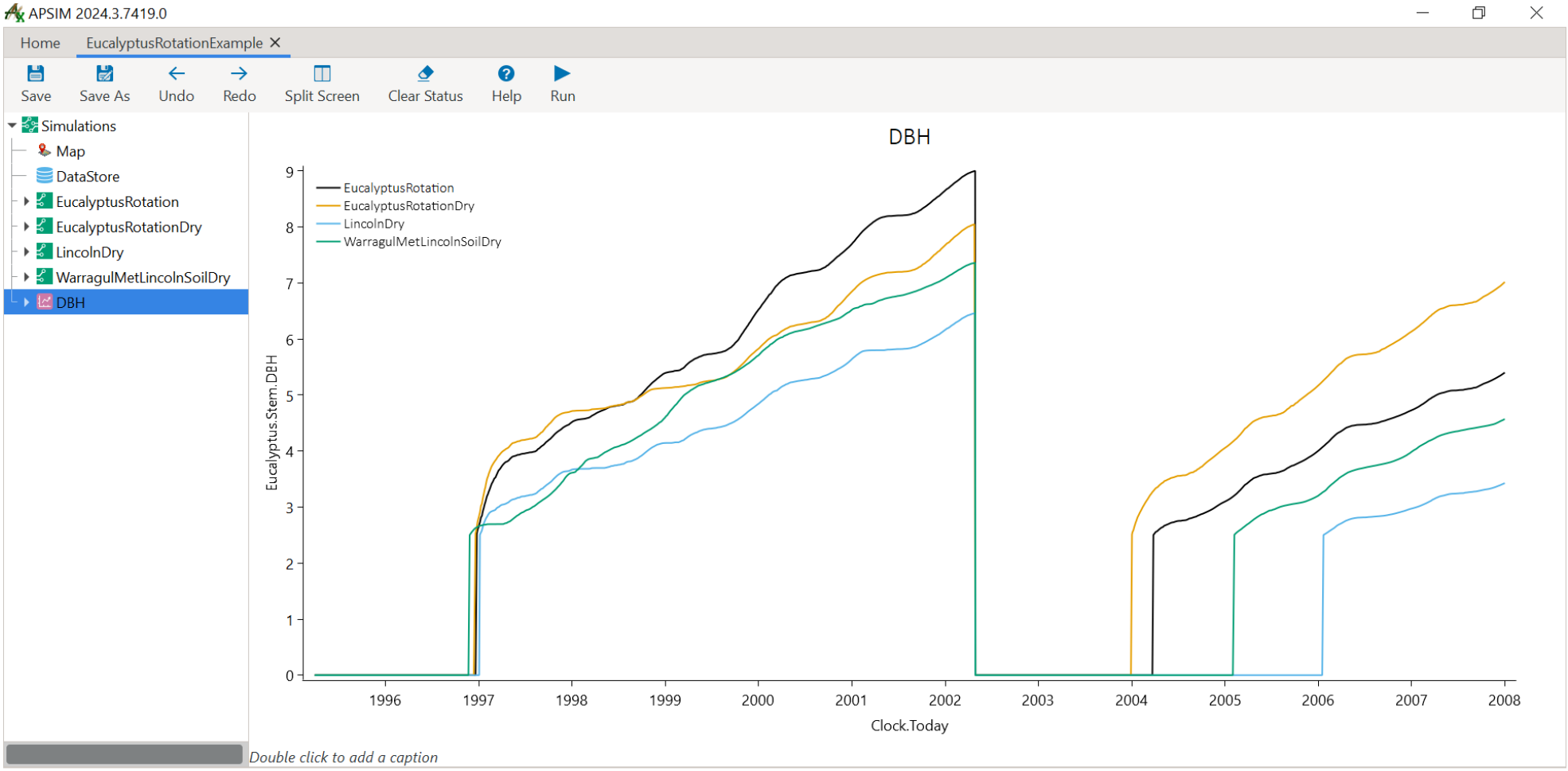
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption

11d.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
Map
DataStore
EucalyptusRotation
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDry
DBH
DBH
EucalyptusRotation
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDry
Eucalyptus.Stem.DBH
0
1
2
3
4
5
6
7
8
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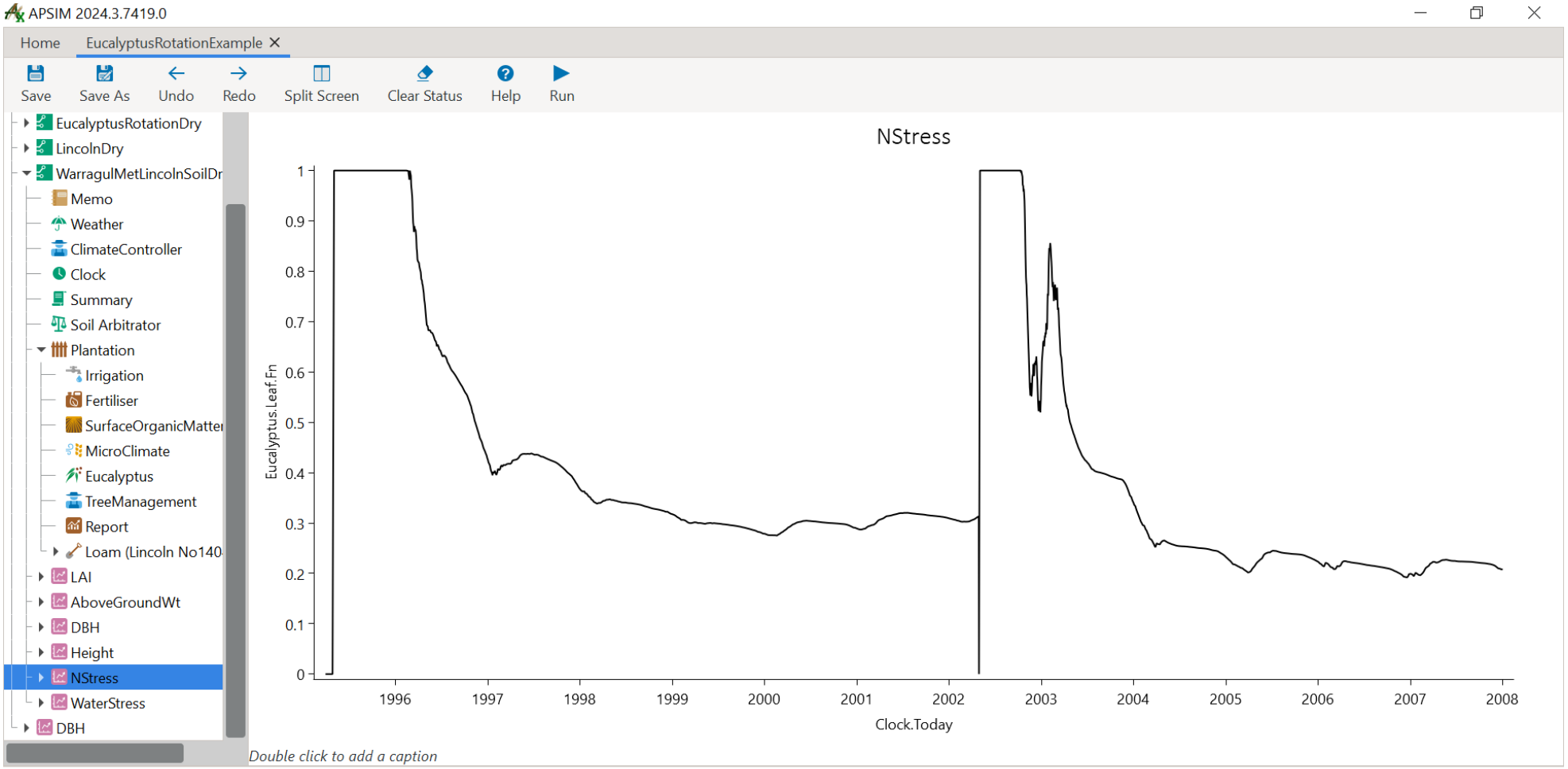
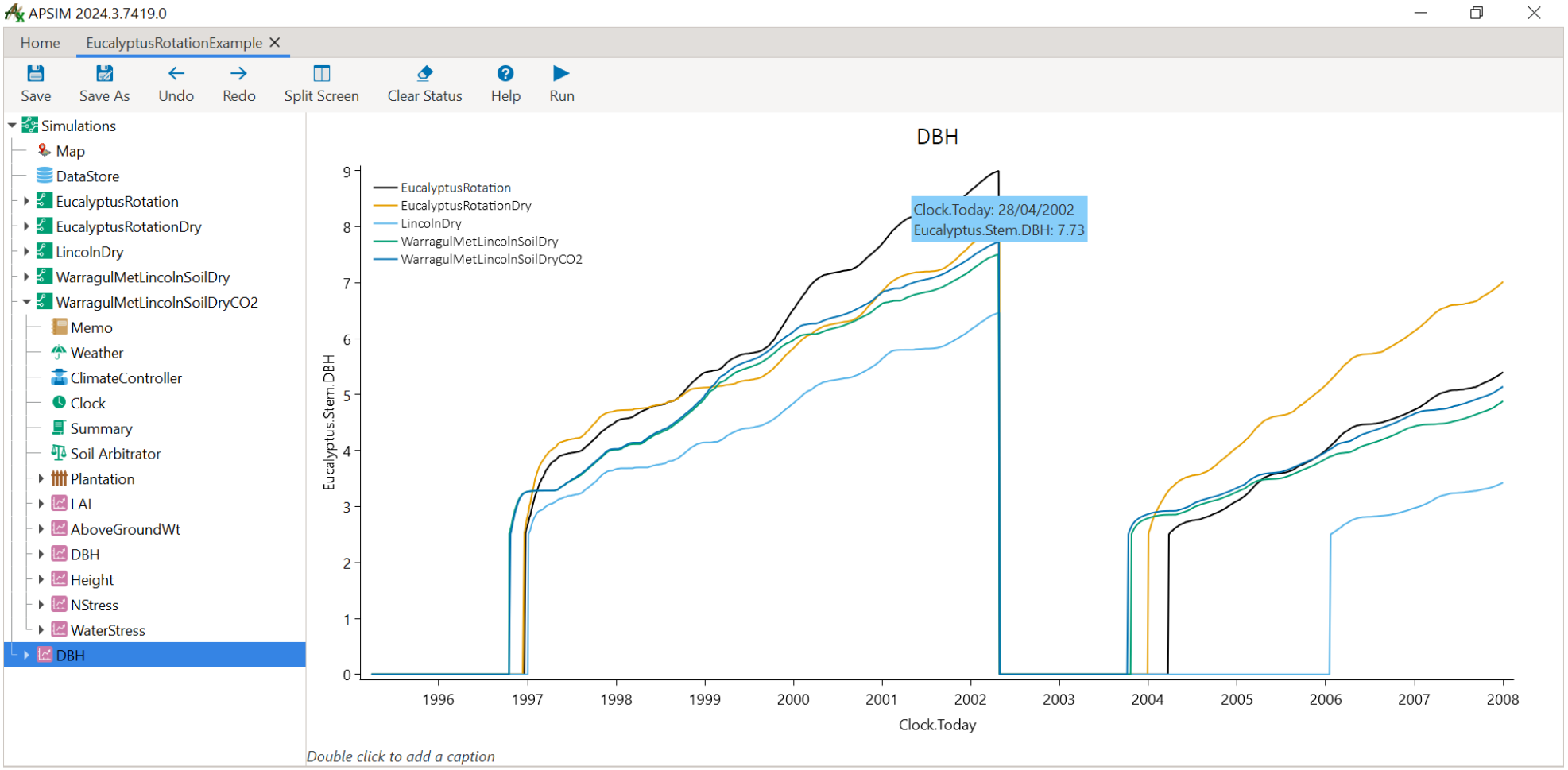
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption

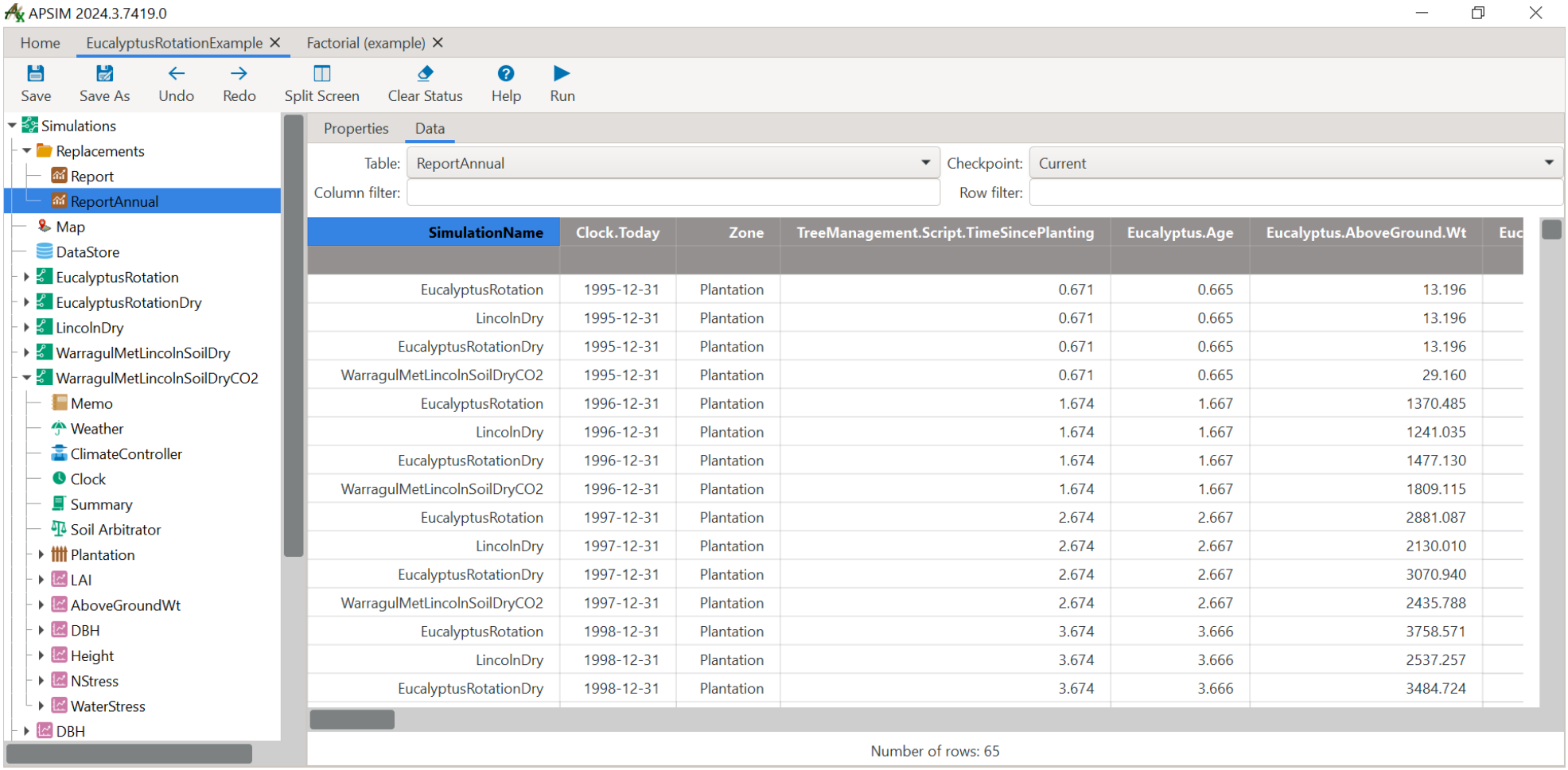
11h.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDr
Memo
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
Irrigation
Fertiliser
SurfaceOrganicMatte
MicroClimate
Eucalyptus
TreeManagement
Report
Loam (Lincoln No140
LAI
AboveGroundWt
DBH
Height
NStress
WaterStress
DBH
NStress
Eucalyptus.Leaf.Fn
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption

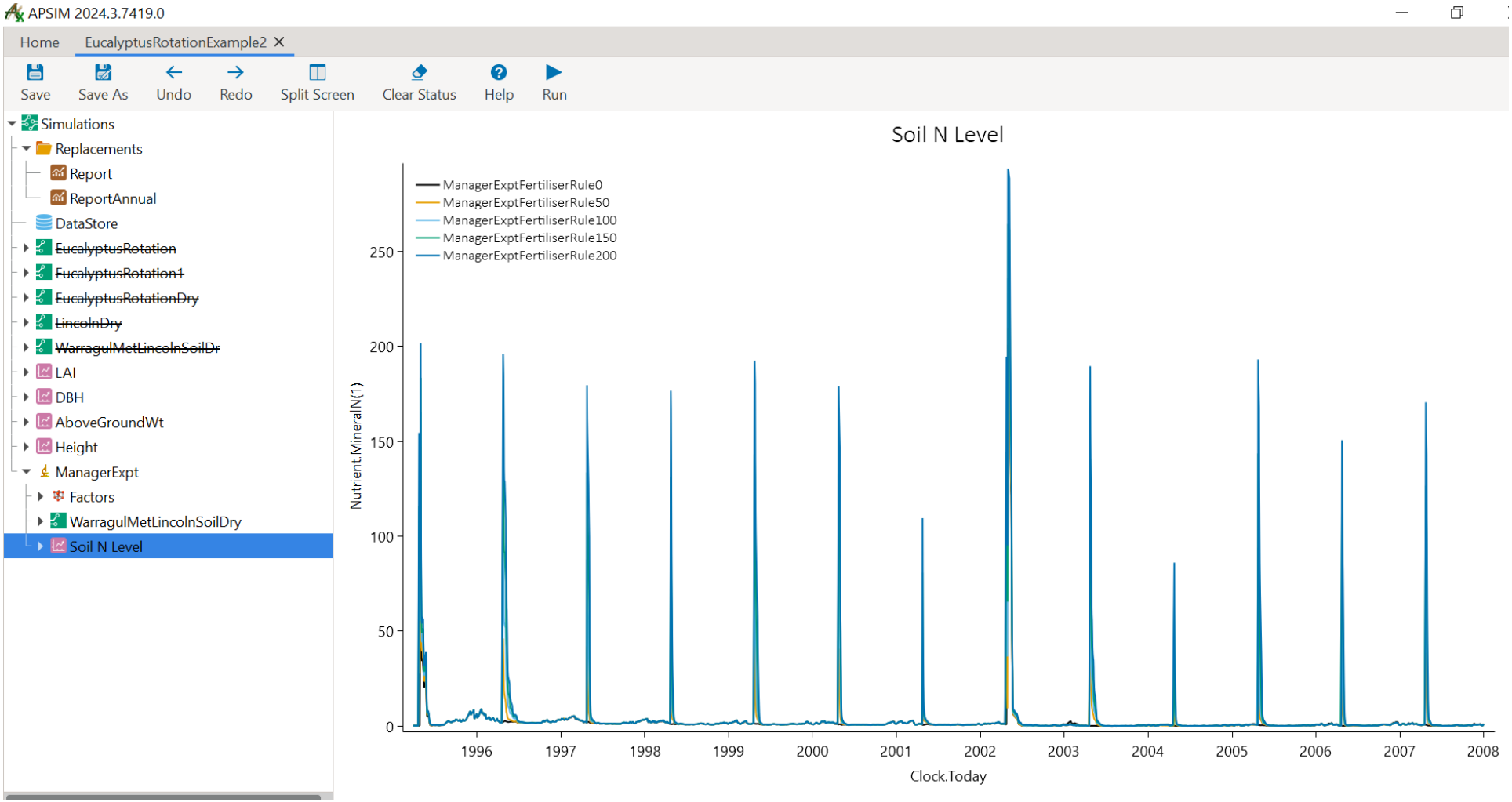
12b.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
Map
DataStore
EucalyptusRotation
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDry
WarragulMetLincolnSoilDryCO2
Memo
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
LAI
AboveGroundWt
DBH
Height
NStress
WaterStress
DBH
EucalyptusRotation
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDry
WarragulMetLincolnSoilDryCO2
Clock.Today: 28/04/2002
Eucalyptus.Stem.DBH: 7.73
Eucalyptus.Stem.DBH
Clock.Today
0
1
2
3
4
5
6
7
8
9
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Double click to add a caption

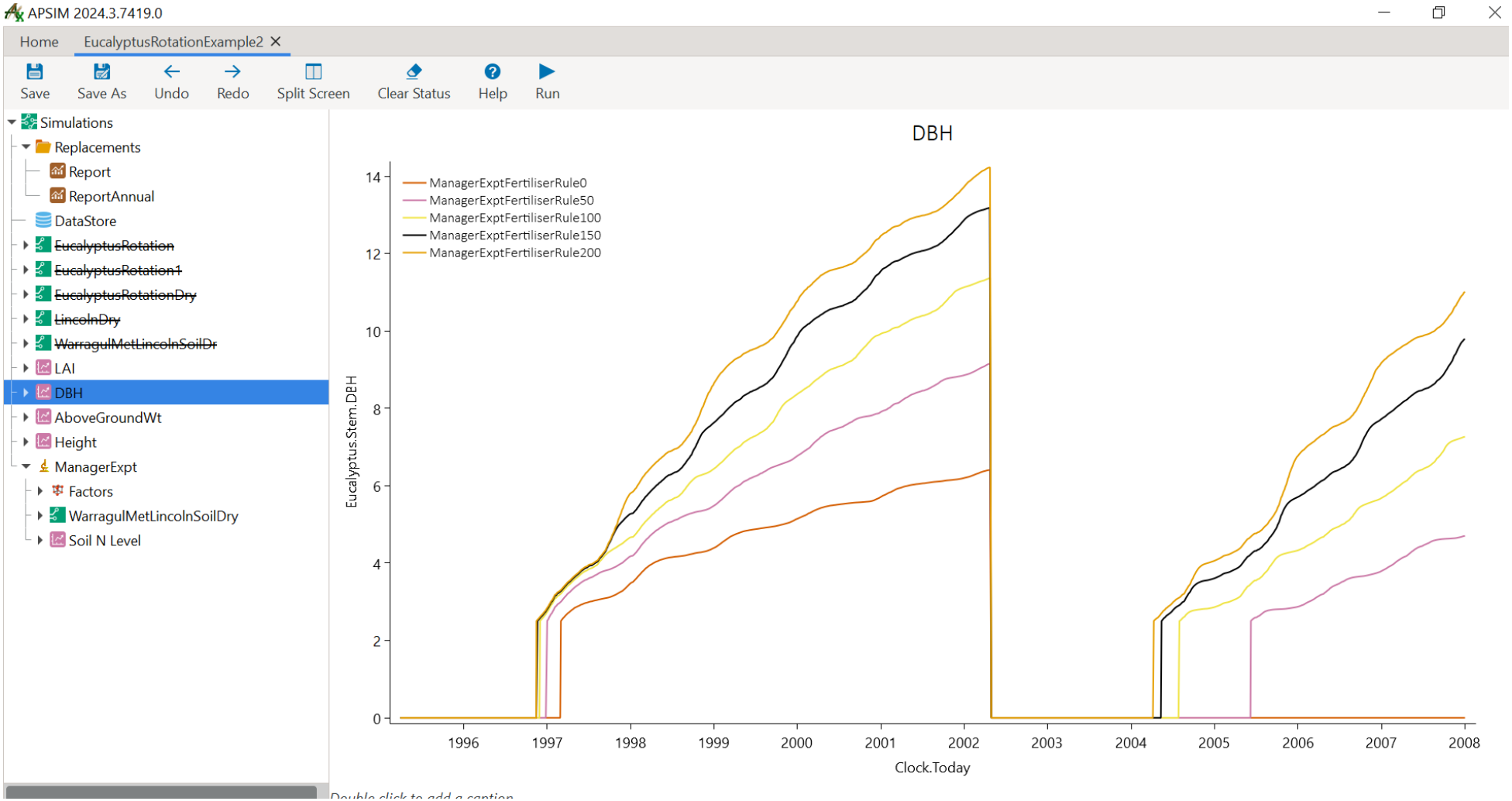
14k.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Factorial (example)
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
Replacements
Report
ReportAnnual
Map
DataStore
EucalyptusRotation
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDry
WarragulMetLincolnSoilDryCO2
Memo
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
LAI
AboveGroundWt
DBH
Height
NStress
WaterStress
DBH
Properties
Data
Table: ReportAnnual
Checkpoint: Current
Column filter:
Row filter:
SimulationName | Clock.Today | Zone | TreeManagement.Script.TimeSincePlanting | Eucalyptus.Age | Eucalyptus.AboveGround.Wt | Euc
EucalyptusRotation | 1995-12-31 | Plantation | 0.671 | 0.665 | 13.196
LincolnDry | 1995-12-31 | Plantation | 0.671 | 0.665 | 13.196
EucalyptusRotationDry | 1995-12-31 | Plantation | 0.671 | 0.665 | 13.196
WarragulMetLincolnSoilDryCO2 | 1995-12-31 | Plantation | 0.671 | 0.665 | 29.160
EucalyptusRotation | 1996-12-31 | Plantation | 1.674 | 1.667 | 1370.485
LincolnDry | 1996-12-31 | Plantation | 1.674 | 1.667 | 1241.035
EucalyptusRotationDry | 1996-12-31 | Plantation | 1.674 | 1.667 | 1477.130
WarragulMetLincolnSoilDryCO2 | 1996-12-31 | Plantation | 1.674 | 1.667 | 1809.115
EucalyptusRotation | 1997-12-31 | Plantation | 2.674 | 2.667 | 2881.087
LincolnDry | 1997-12-31 | Plantation | 2.674 | 2.667 | 2130.010
EucalyptusRotationDry | 1997-12-31 | Plantation | 2.674 | 2.667 | 3070.940
WarragulMetLincolnSoilDryCO2 | 1997-12-31 | Plantation | 2.674 | 2.667 | 2435.788
EucalyptusRotation | 1998-12-31 | Plantation | 3.674 | 3.666 | 3758.571
LincolnDry | 1998-12-31 | Plantation | 3.674 | 3.666 | 2537.257
EucalyptusRotationDry | 1998-12-31 | Plantation | 3.674 | 3.666 | 3484.724
Number of rows: 65
Successfully saved to C:\Users\sme016\OneDrive - CSIRO\1. Rafael Visit 2023\APSIM Training Workshop\Sims\EucalyptusRotationExample.apsimx

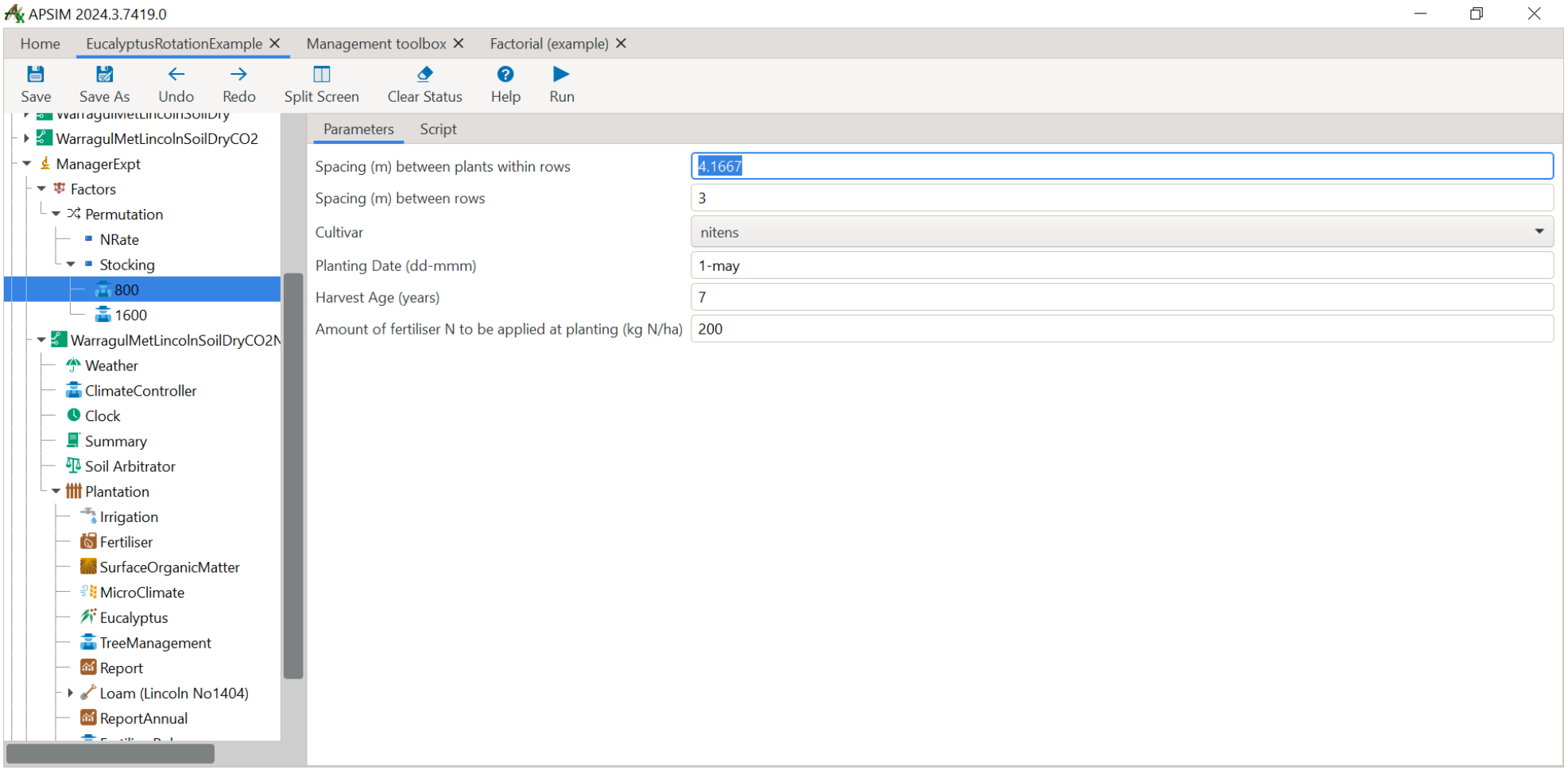
15h., 15m. and 15q.

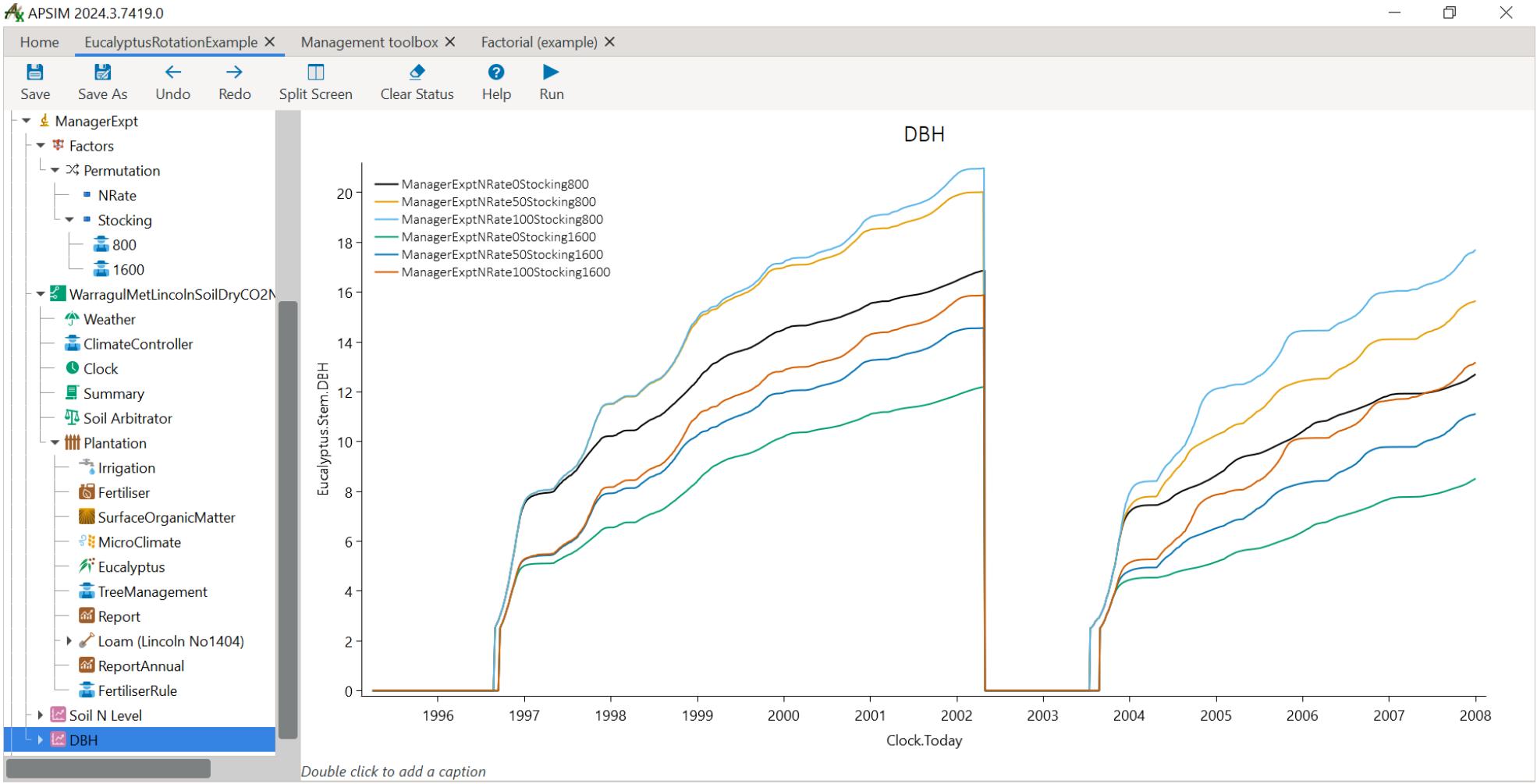


15q.

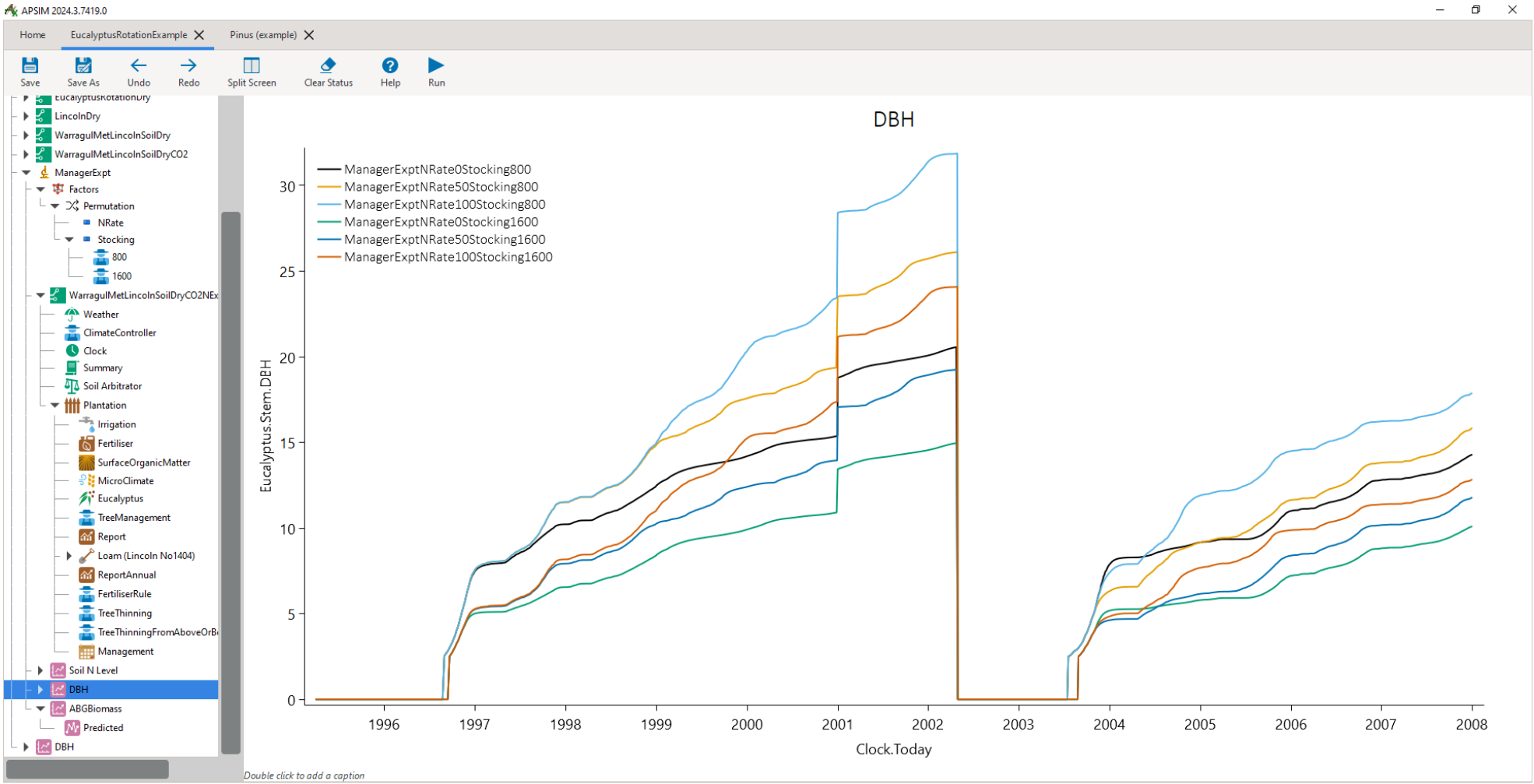

APSIM 2024.3.7419.0
Home
EucalyptusRotationExample2
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
Replacements
Report
ReportAnnual
DataStore
EucalyptusRotation
EucalyptusRotation1
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDr
LAI
DBH
AboveGroundWt
Height
ManagerExpt
Factors
WarragulMetLincolnSoilDry
Soil N Level
DBH
ManagerExptFertiliserRule0
ManagerExptFertiliserRule50
ManagerExptFertiliserRule100
ManagerExptFertiliserRule150
ManagerExptFertiliserRule200
Eucalyptus.Stem.DBH
0
2
4
6
8
10
12
14
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption

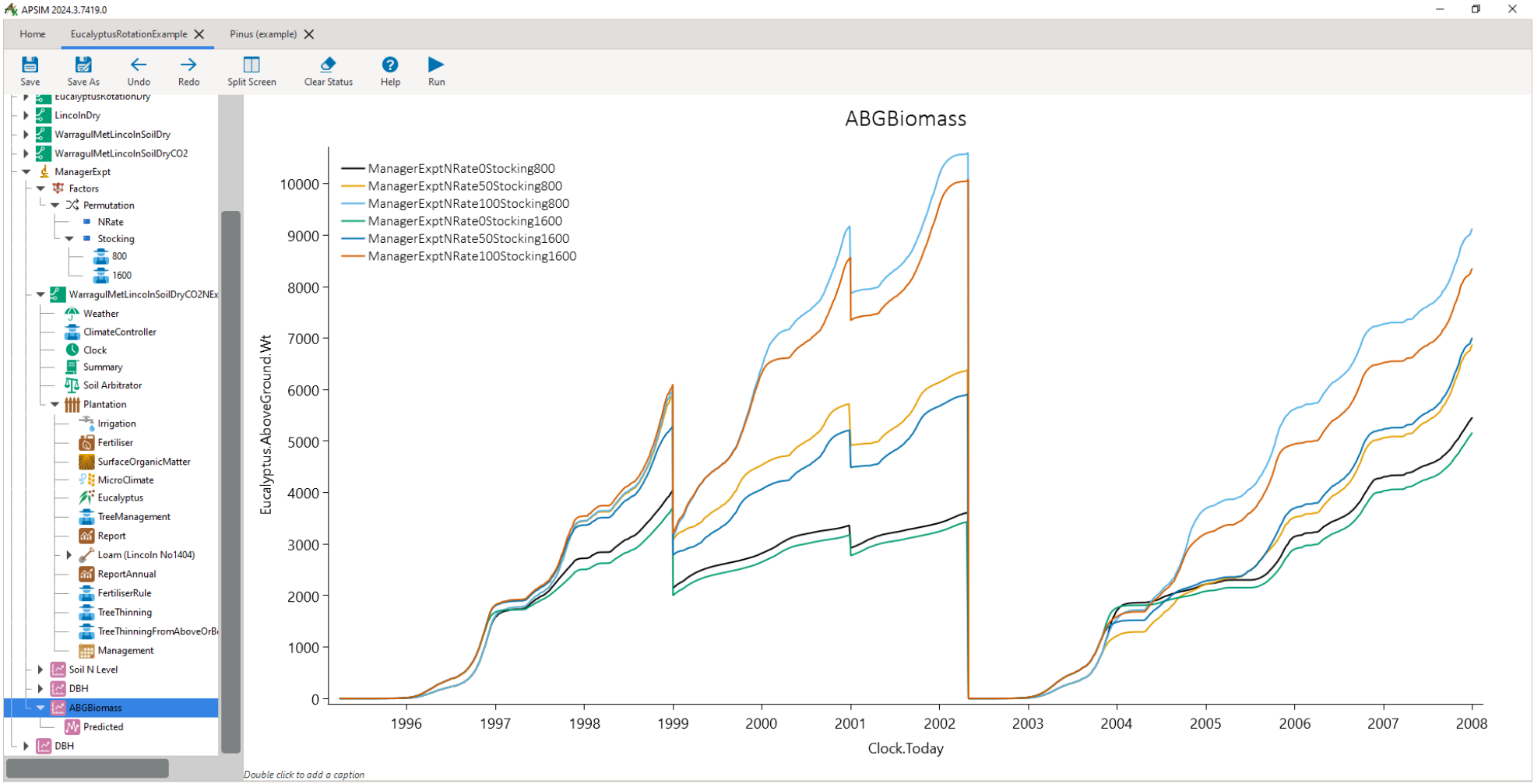
15r.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Management toolbox
Factorial (example)
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
WarragulMetLincolnSoilDryCO2
ManagerExpt
Factors
Permutation
NRate
Stocking
800
1600
WarragulMetLincolnSoilDryCO2N
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
Loam (Lincoln No1404)
ReportAnnual
Parameters
Script
Spacing (m) between plants within rows
4.1667
Spacing (m) between rows
3
Cultivar
nitens
Planting Date (dd-mmm)
1-may
Harvest Age (years)
7
Amount of fertiliser N to be applied at planting (kg N/ha)
200

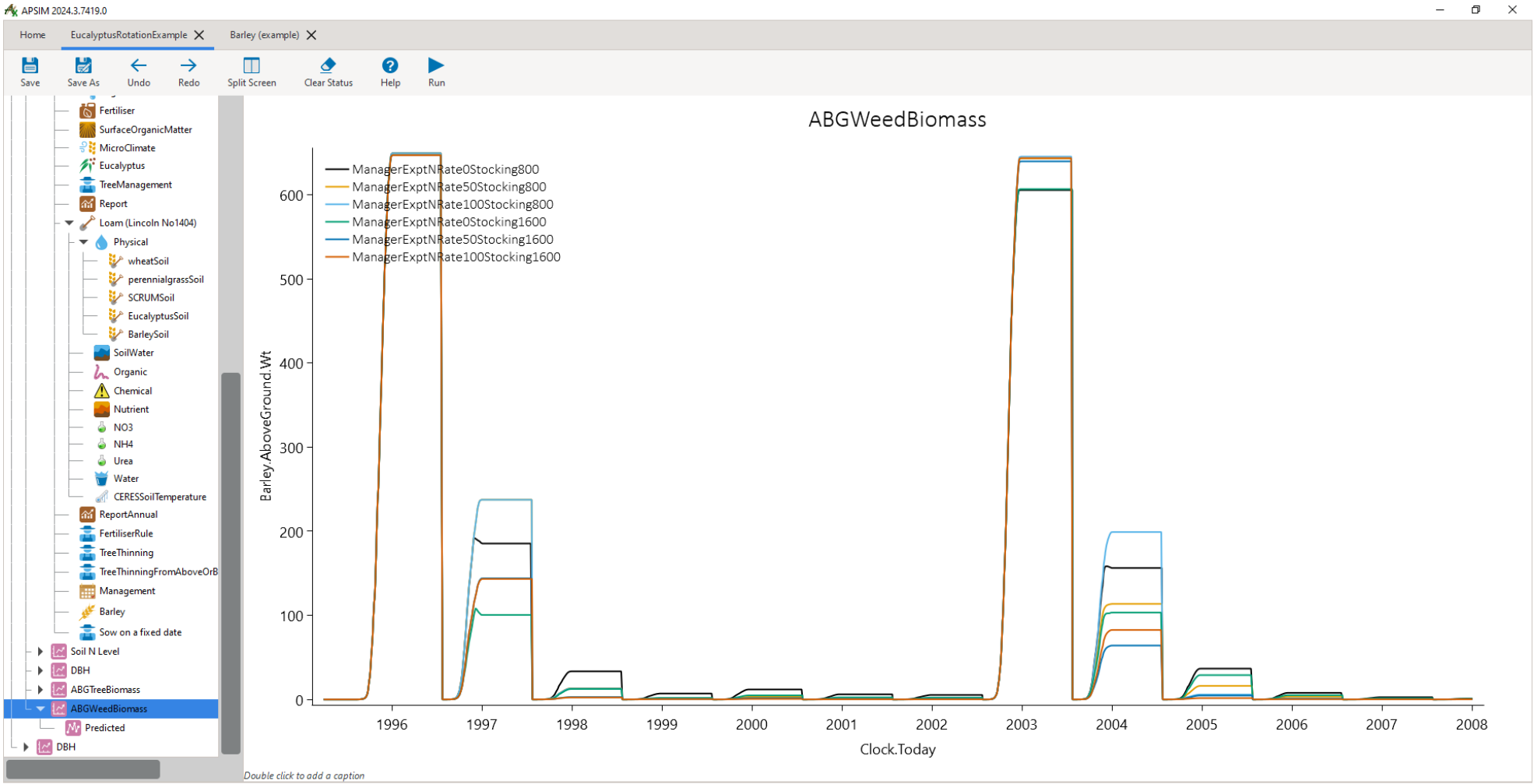

APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Management toolbox
Factorial (example)
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
ManagerExpt
Factors
Permutation
NRate
Stocking
800
1600
WarragulMetLincolnSoilDryCO2N
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
Loam (Lincoln No1404)
ReportAnnual
FertiliserRule
Soil N Level
DBH
DBH
ManagerExptNRate0Stocking800
ManagerExptNRate50Stocking800
ManagerExptNRate100Stocking800
ManagerExptNRate0Stocking1600
ManagerExptNRate50Stocking1600
ManagerExptNRate100Stocking1600
Eucalyptus.Stem.DBH
0
2
4
6
8
10
12
14
16
18
20
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption

16d.

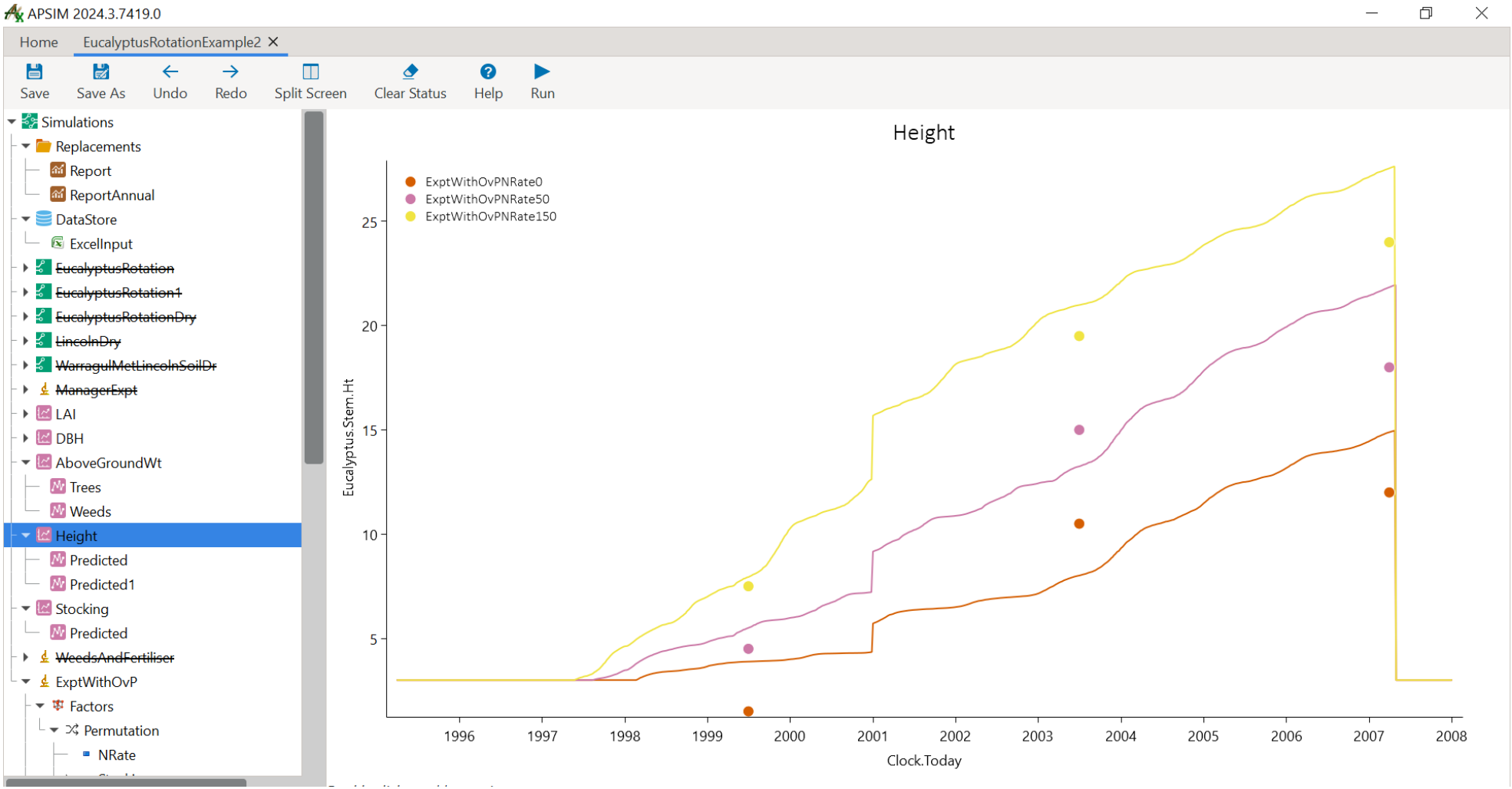

APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Pinus (example)
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
LincolnDry
WarragulMetLincolnSoilDry
WarragulMetLincolnSoilDryCO2
ManagerExpt
Factors
Permutation
NRate
Stocking
800
1600
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
Loam (Lincoln No1404)
ReportAnnual
FertiliserRule
TreeThinning
Management
Soil N Level
DBH
ABGBiomass
Predicted
DBH
ManagerExptNRate0Stocking800
ManagerExptNRate50Stocking800
ManagerExptNRate100Stocking800
ManagerExptNRate0Stocking1600
ManagerExptNRate50Stocking1600
ManagerExptNRate100Stocking1600
Eucalyptus.Stem.DBH
Clock.Today
Double click to add a caption


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Pinus (example)
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
LincolnDry
WarragulMetLincolnSoilDry
WarragulMetLincolnSoilDryCO2
ManagerExpt
Factors
Permutation
NRate
Stocking
800
1600
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
Loam (Lincoln No1404)
ReportAnnual
FertiliserRule
TreeThinning
Management
Soil N Level
DBH
ABGBiomass
Predicted
DBH
ABGBiomass
ManagerExptNRate0Stocking800
ManagerExptNRate50Stocking800
ManagerExptNRate100Stocking800
ManagerExptNRate0Stocking1600
ManagerExptNRate50Stocking1600
ManagerExptNRate100Stocking1600
Eucalyptus.AboveGround.Wt
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption

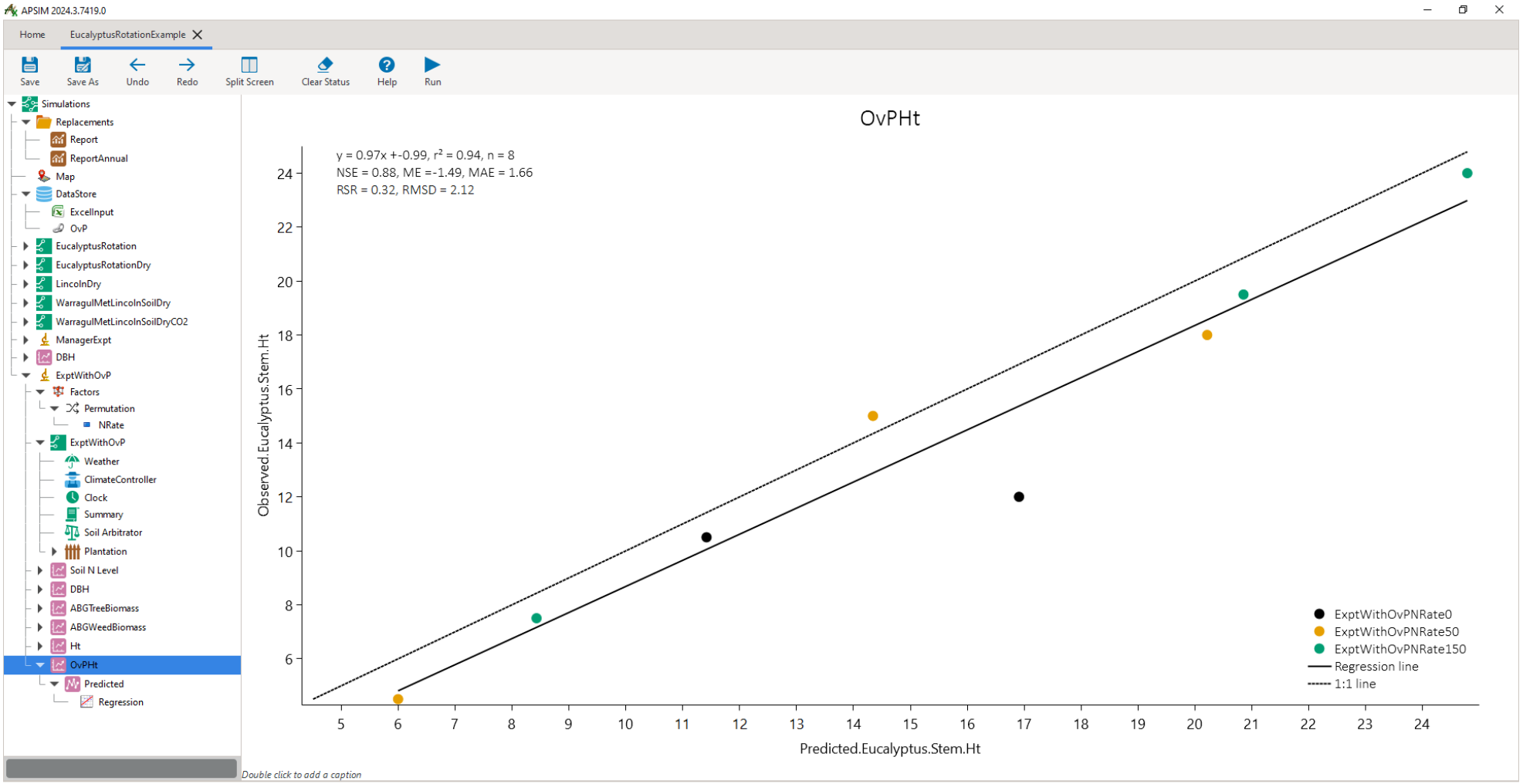
17h.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Barley (example)
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
Loam (Lincoln No1404)
Physical
wheatSoil
perennialgrassSoil
SCRUMSoil
EucalyptusSoil
BarleySoil
SoilWater
Organic
Chemical
Nutrient
NO3
NH4
Urea
Water
CERESSoilTemperature
ReportAnnual
FertiliserRule
TreeThinning
TreeThinningFromAboveOrB
Management
Barley
Sow on a fixed date
Soil N Level
DBH
ABGTreeBiomass
ABGWeedBiomass
Predicted
DBH
ABGWeedBiomass
ManagerExptNRate0Stocking800
ManagerExptNRate50Stocking800
ManagerExptNRate100Stocking800
ManagerExptNRate0Stocking1600
ManagerExptNRate50Stocking1600
ManagerExptNRate100Stocking1600
Barley.AboveGround.Wt
0
100
200
300
400
500
600
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption

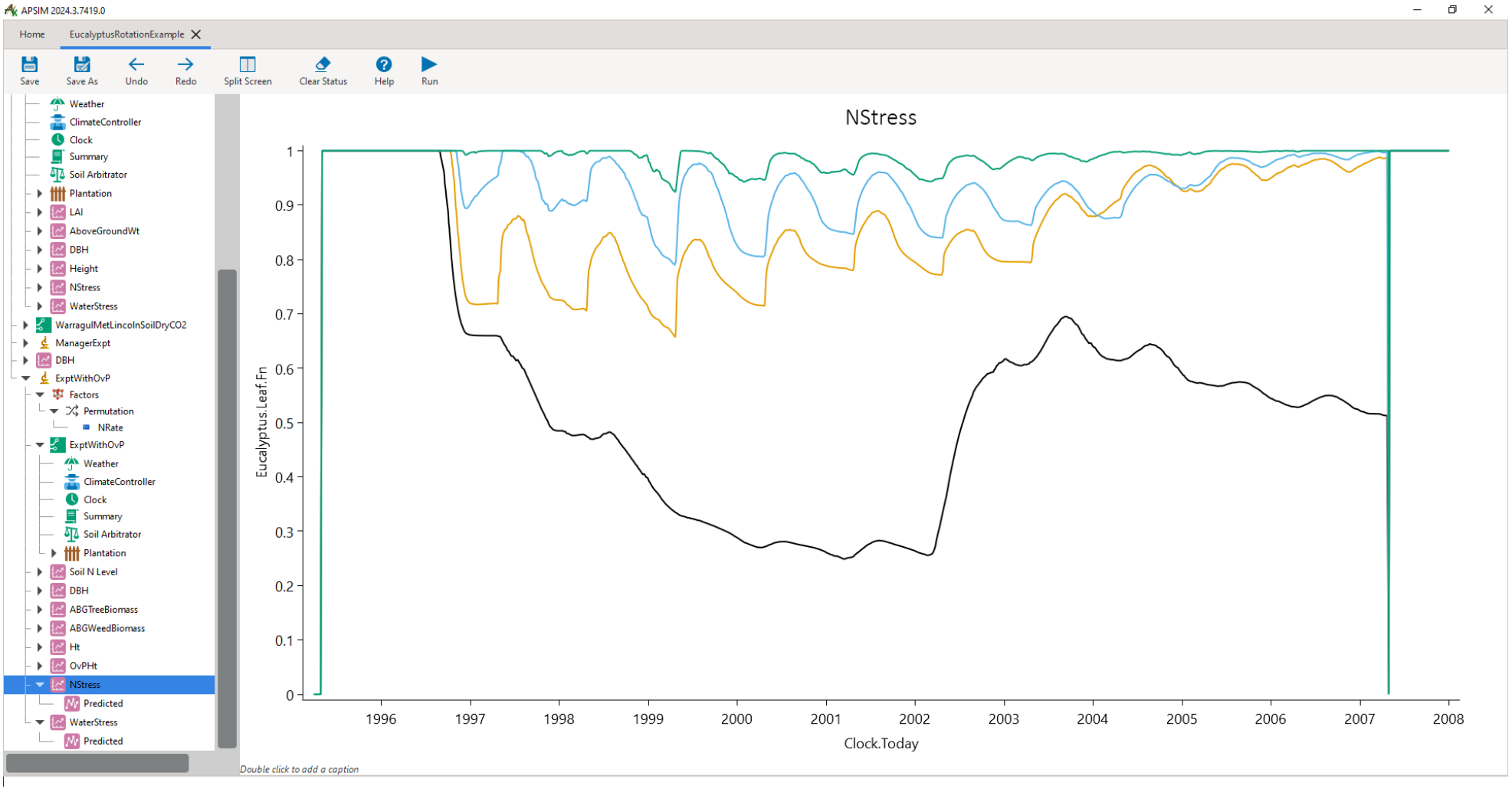
18k.

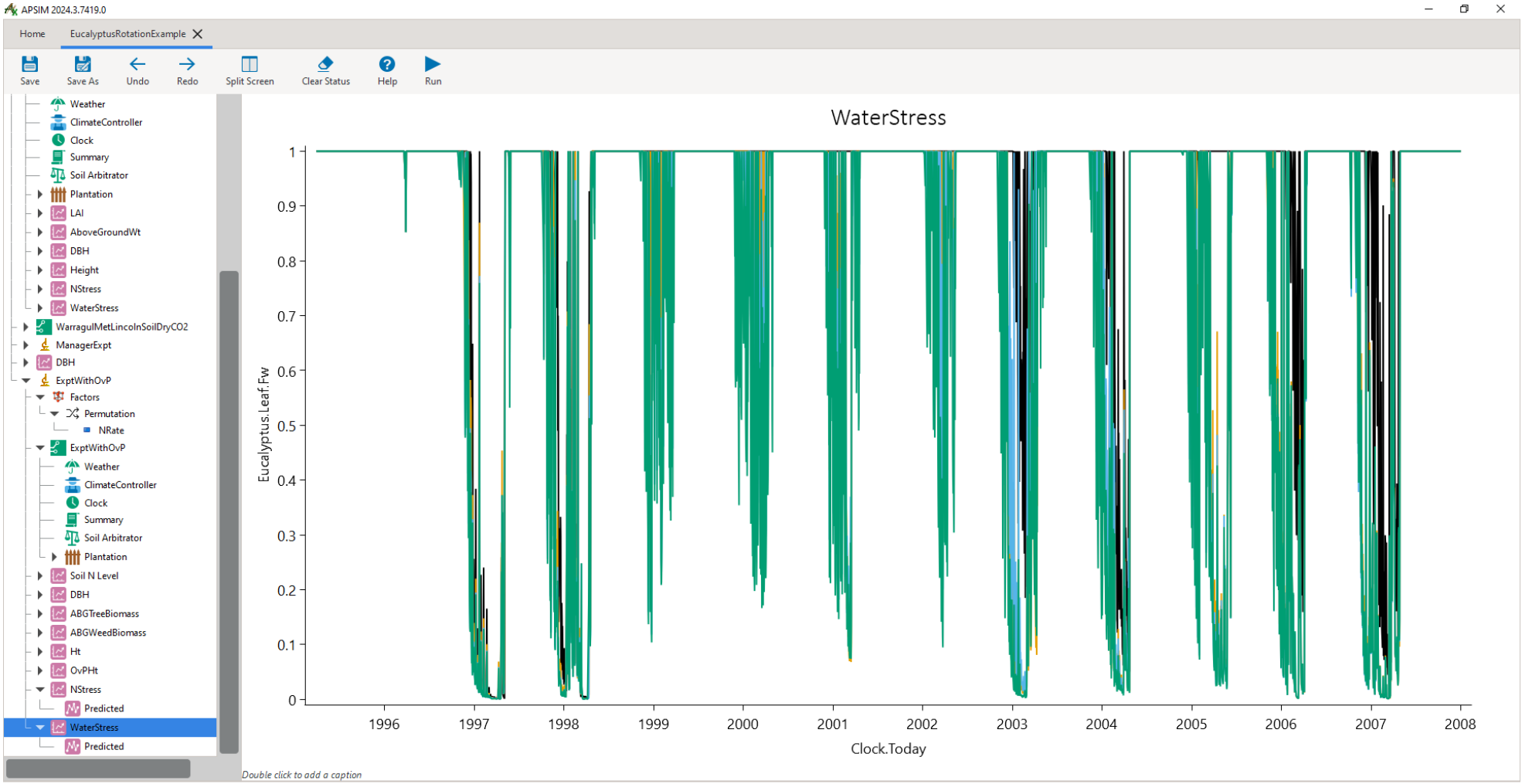

APSIM 2024.3.7419.0
Home
EucalyptusRotationExample2
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
Replacements
Report
ReportAnnual
DataStore
ExcelInput
EucalyptusRotation
EucalyptusRotation1
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDr
ManagerExpt
LAI
DBH
AboveGroundWt
Trees
Weeds
Height
Predicted
Predicted1
Stocking
Predicted
WeedsAndFertiliser
ExptWithOvP
Factors
Permutation
NRate
Height
ExptWithOvPNRate0
ExptWithOvPNRate50
ExptWithOvPNRate150
Eucalyptus.Stem.Ht
Clock.Today
5
10
15
20
25
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

19i.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Simulations
Replacements
Report
ReportAnnual
Map
DataStore
ExcelInput
OvP
EucalyptusRotation
EucalyptusRotationDry
LincolnDry
WarragulMetLincolnSoilDry
WarragulMetLincolnSoilDryCO2
ManagerExpt
DBH
ExptWithOvP
Factors
Permutation
NRate
ExptWithOvP
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
Soil N Level
DBH
ABGTreeBiomass
ABGWeedBiomass
Ht
OvPHt
Predicted
Regression
OvPHt
y = 0.97x +-0.99, r² = 0.94, n = 8
NSE = 0.88, ME =-1.49, MAE = 1.66
RSR = 0.32, RMSD = 2.12
Observed.Eucalyptus.Stem.Ht
Predicted.Eucalyptus.Stem.Ht
ExptWithOvPNRate0
ExptWithOvPNRate50
ExptWithOvPNRate150
Regression line
1:1 line
Double click to add a caption

20c.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
Save
Save As
Undo
Redo
Split Screen
Clear Status
Help
Run
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
LAI
AboveGroundWt
DBH
Height
NStress
WaterStress
WarragulMetLincolnSoilDryCO2
ManagerExpt
DBH
ExptWithOvP
Factors
Permutation
NRate
ExptWithOvP
Weather
ClimateController
Clock
Summary
Soil Arbitrator
Plantation
Soil N Level
DBH
ABGTreeBiomass
ABGWeedBiomass
Ht
OvPHt
NStress
Predicted
WaterStress
Predicted
NStress
Eucalyptus.Leaf.Fn
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Clock.Today
Double click to add a caption


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
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Save As
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Redo
Split Screen
Clear Status
Help
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Weather
ClimateController
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Summary
Soil Arbitrator
Plantation
LAI
AboveGroundWt
DBH
Height
NStress
WaterStress
WarragulMetLincolnSoilDryCO2
ManagerExpt
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Soil Arbitrator
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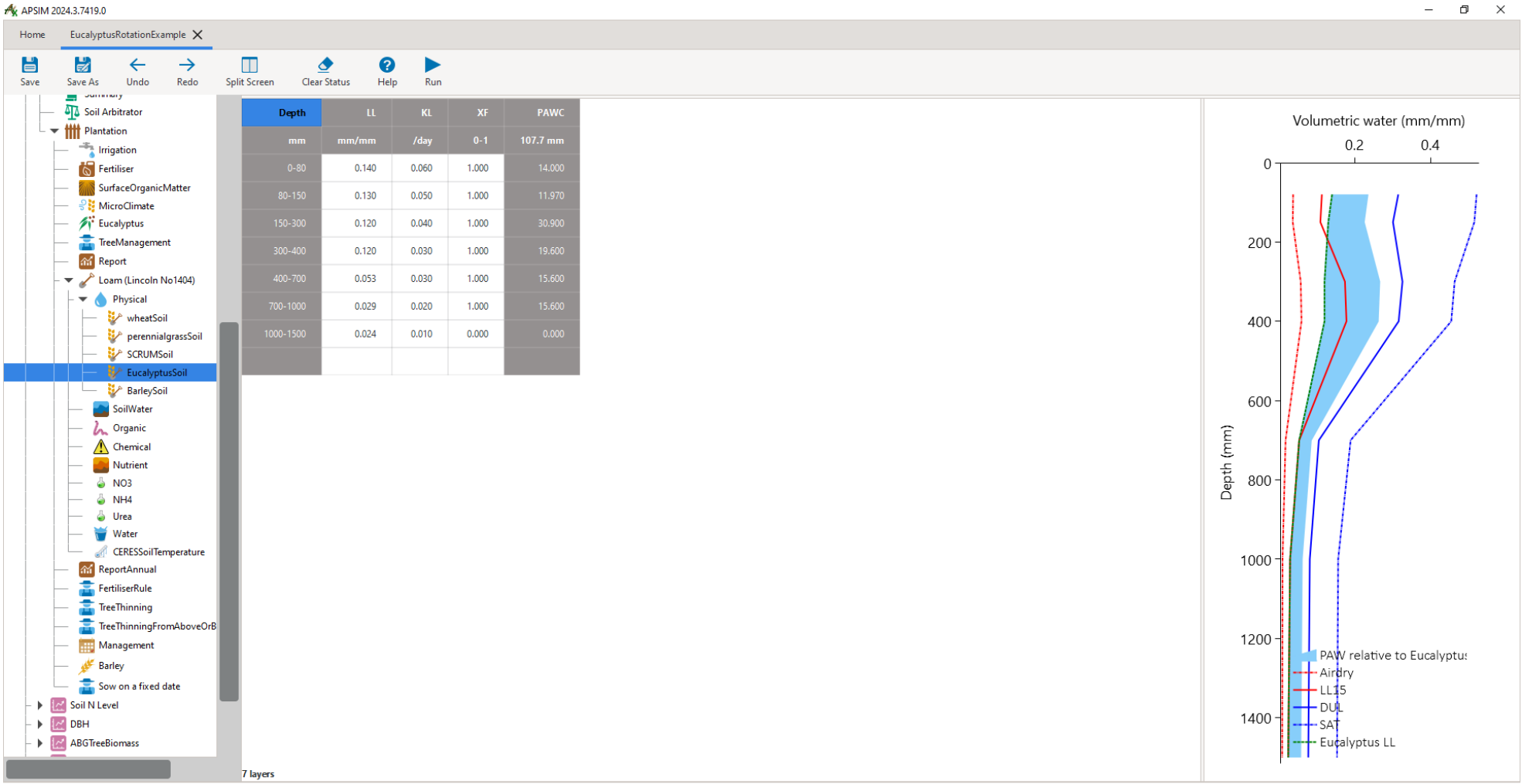
Soil N Level
DBH
ABGTreeBiomass
ABGWeedBiomass
Ht
OvPHt
NStress
Predicted
WaterStress
Predicted
WaterStress
Eucalyptus.Leaf.Fw
Clock.Today
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
Double click to add a caption

20h.


APSIM 2024.3.7419.0
Home
EucalyptusRotationExample
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Save As
Undo
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Split Screen
Clear Status
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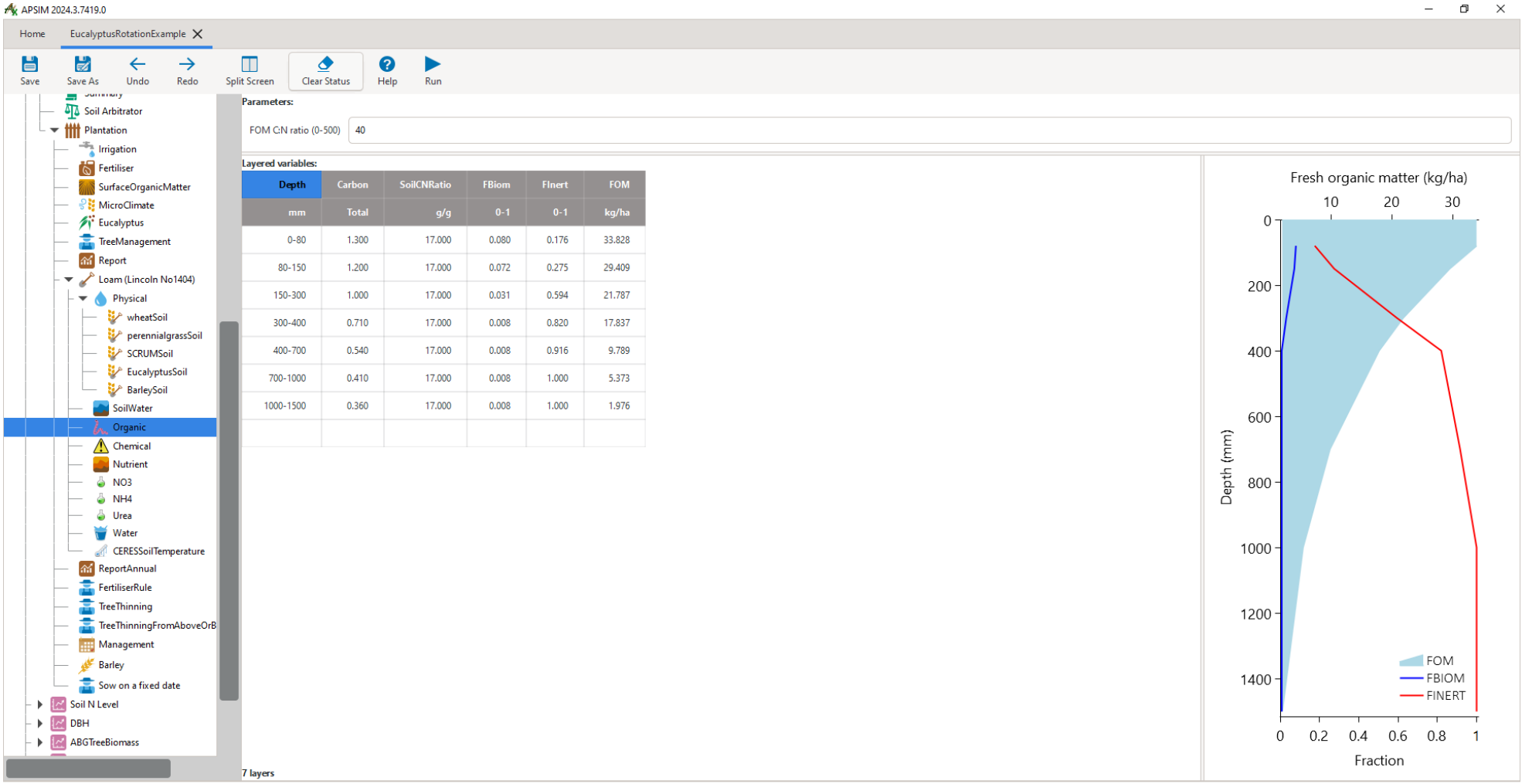
Run
Soil Arbitrator
Plantation
Irrigation
Fertiliser
SurfaceOrganicMatter
MicroClimate
Eucalyptus
TreeManagement
Report
Loam (Lincoln No1404)
Physical
wheatSoil
perennialgrassSoil
SCRUMSoil
EucalyptusSoil
BarleySoil
SoilWater
Organic
Chemical
Nutrient
NO3
NH4
Urea
Water
CERESSoilTemperature
ReportAnnual
FertiliserRule
TreeThinning
TreeThinningFromAboveOrB
Management
Barley
Sow on a fixed date
Soil N Level
DBH
ABGTreeBiomass
Depth | LL | KL | XF | PAWC
mm | mm/mm | /day | 0-1 | 107.7 mm
0-80 | 0.140 | 0.060 | 1.000 | 14.000
80-150 | 0.130 | 0.050 | 1.000 | 11.970
150-300 | 0.120 | 0.040 | 1.000 | 30.900
300-400 | 0.120 | 0.030 | 1.000 | 19.600
400-700 | 0.053 | 0.030 | 1.000 | 15.600
700-1000 | 0.029 | 0.020 | 1.000 | 15.600
1000-1500 | 0.024 | 0.010 | 0.000 | 0.000
7 layers
Volumetric water (mm/mm)
0.2
0.4
Depth (mm)
0
200
400
600
800
1000
1200
1400
PAW relative to Eucalyptus
Airdry
LL15
DUL
SAT
Eucalyptus LL


APSIM 2024.3.7419.0
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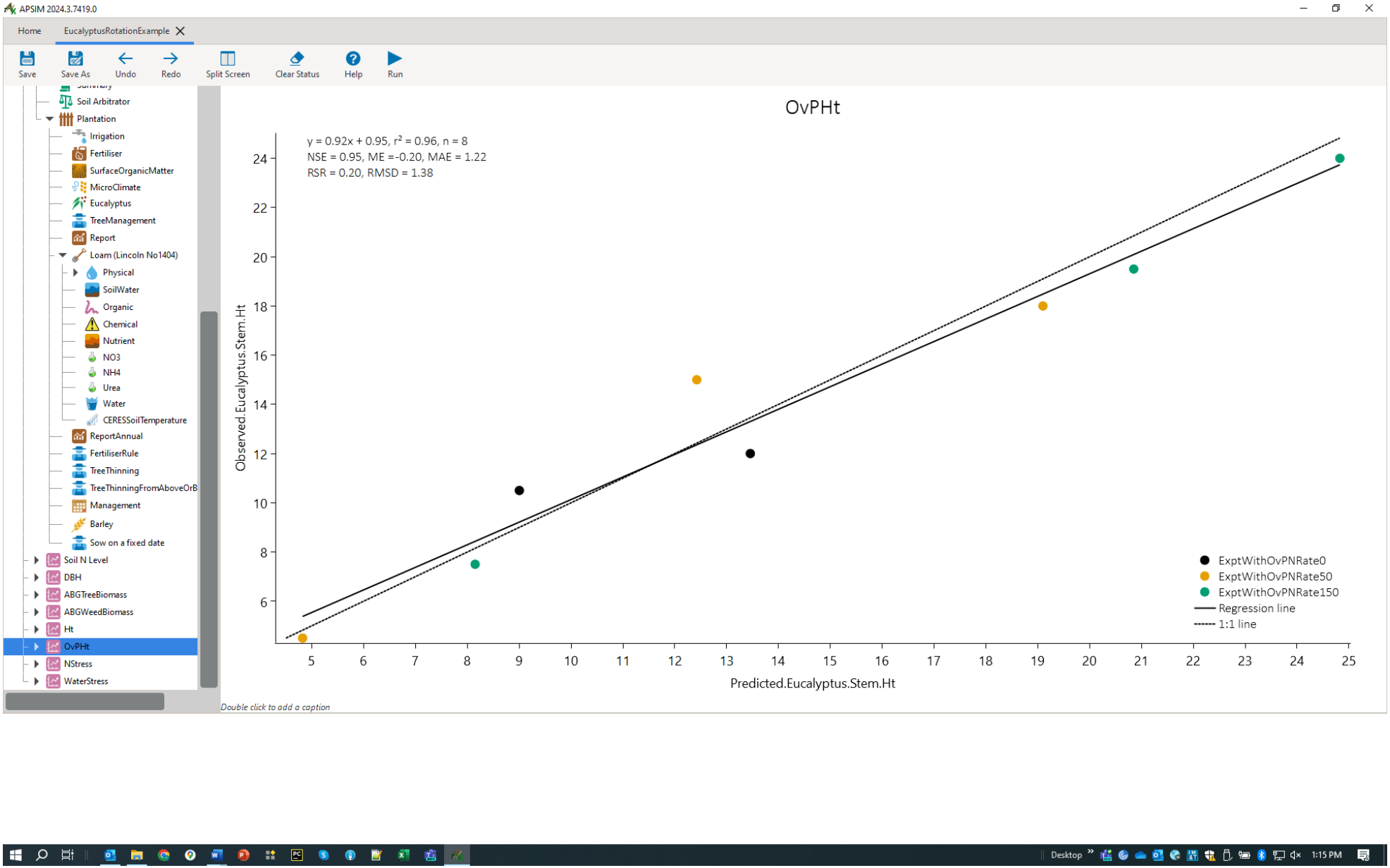
Eucalyptus
TreeManagement
Report
Loam (Lincoln No1404)
Physical
wheatSoil
perennialgrassSoil
SCRUMSoil
EucalyptusSoil
BarleySoil
SoilWater
Organic
Chemical
Nutrient
NO3
NH4
Urea
Water
CERESSoilTemperature
ReportAnnual
FertiliserRule
TreeThinning
TreeThinningFromAboveOrB
Management
Barley
Sow on a fixed date
Soil N Level
DBH
ABGTreeBiomass
Parameters:
FOM C:N ratio (0-500)
40
Layered variables:
Depth
Carbon
SoilCNRatio
FBiom
FInert
FOM
mm
Total
g/g
0-1
0-1
kg/ha
0-80 1.300 17.000 0.080 0.176 33.828
80-150 1.200 17.000 0.072 0.275 29.409
150-300 1.000 17.000 0.031 0.594 21.787
300-400 0.710 17.000 0.008 0.820 17.837
400-700 0.540 17.000 0.008 0.916 9.789
700-1000 0.410 17.000 0.008 1.000 5.373
1000-1500 0.360 17.000 0.008 1.000 1.976
7 layers
Fresh organic matter (kg/ha)
Depth (mm)
Fraction
FOM
FBIOM
FINERT


APSIM 2024.3.7419.0
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TreeThinningFromAboveOrB
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Barley
Sow on a fixed date
Soil N Level
DBH
ABGTreeBiomass
ABGWeedBiomass
Ht
OvPHt
NStress
WaterStress
OvPHt
y = 0.92x + 0.95, r² = 0.96, n = 8
NSE = 0.95, ME =-0.20, MAE = 1.22
RSR = 0.20, RMSD = 1.38
Observed.Eucalyptus.Stem.Ht
Predicted.Eucalyptus.Stem.Ht
ExptWithOvPNRate0
ExptWithOvPNRate50
ExptWithOvPNRate150
Regression line
1:1 line
Double click to add a caption
Desktop
1:15 PM