

Forecaster Calculator v1.0

Melissa Evans



Recap

- Joint project between FOA and Scion
- Excel Calculators
- Radiata and Douglas-fir
- Web delivery
- Forecaster Calculator



Making the calculators more accessible

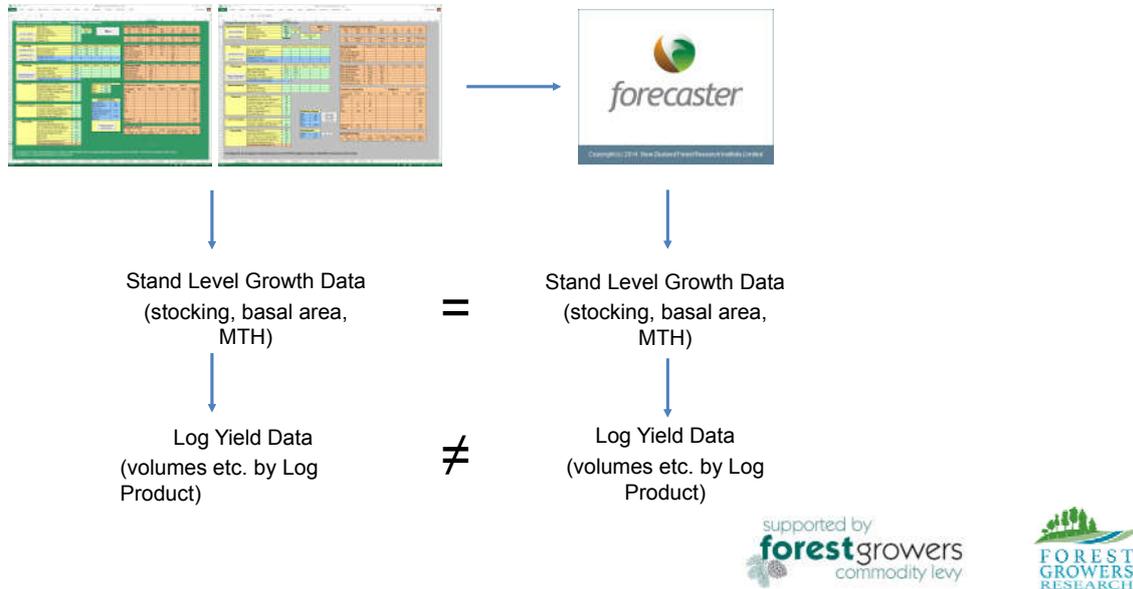
- Access anytime, anywhere
- Device independent
- Consistency with Forecaster and the latest available version (2.2)
- Potential for future add-ons in future versions
- Kept simple to ensure it was easy to pick up and use



Current Calculators in Excel

The image displays two side-by-side Excel spreadsheets. The left spreadsheet is titled "Radiata Pine Calculator Version 4.1 Pro" and the right is "Douglas-fir Calculator Version 4.0". Both spreadsheets are filled with data tables and calculation results. The left spreadsheet includes sections for "Stand information", "Prunings", "Thinnings", "Financial", "Land & Insect", "Log quality", and "Economic results". The right spreadsheet includes sections for "Stand information", "Prunings", "Thinnings", "Measurements", "Financial", "Land & Insect", "Log quality", and "Economic results". Both spreadsheets have a "Run" button and various input fields for user-defined parameters.

Current access to models for small growers



Delivering “calculator-like” functionality via the web

- **Version 1** = radiata pine and Douglas-fir calculators only
- Based on Forecaster code hence growth are consistent with those predicted by Forecaster
- Uses Forecaster spatial surfaces (e.g. Site Index and 300 Index)

Access to the calculator



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Search

About News Links **Calculators**



Welcome to the Forest Growers Research Website

<https://fgr.nz/>

Logging In

Home About Contact Register Log in

Forecaster Calculator

The Forecaster Calculator provides similar functionality to the Radiata Pine Calculator and the Douglas-fir Calculator.

Growth and yield are predicted using the Forecaster code-base, so outputs are consistent with the Forecaster desktop application.

[Get Started](#)

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Use a local account to log in.

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[Register as a new user](#)

[Forgot your password?](#)

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Demonstration – New User

Register.
Create a new account.

Email *

First Name *

Last Name *

Contact Phone Number *

User Type *

Company Name

Forest Location

Forest Area (ha)

Password *

Confirm password *

Notes:

- Fields marked with an "*" are required.
- Passwords must contain at least 6 characters, including at least one digit and one upper and one lower case character.
- The information entered will only be used for profiling web site usage and will not be released to any third parties.

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noreply@scionresearch.com ✉ Melissa Evans 1:12 PM
Forecaster Calculator Registration Confirmation

Welcome to the Forecaster Calculator web site.

You are receiving this email because a new user has been registered using the Registration page of this web site.

Please confirm your registration by clicking [here](#)

Home About Contact

Confirm Email.

Thank you for confirming your email. Please [Click here to Log in](#)

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Home Screen

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Home Screen – the “calculator”

Home About Contact Hello melissa.evans@scoonresearch.com Log off

Latitude (degrees South) 38.221

Longitude (degrees East) 176.07

Altitude (m) 660

Site Index (m) 30

300 Index (m³/ha/annum) 26

600 Index (m³/ha/annum) 0

Condition (Age/Date/DOS)	Event (Prune/Thin/Clearfell)
Date = [Jun 2000]	Plant 1000 stems/ha, Specie: P.RAD
Crop Age = 5.0	Prune 450 stems/ha to 2.4 m

Regime

Latitude (degrees South) 38.221000000000004

Longitude (degrees East) 176.06999999999999

Altitude (m) 660

Condition (Age/Date/DOS)	Event (Prune/Thin/Clearfell)
Date = [Jun 2000]	Plant 1200 stems/ha, Specie: P.RAD
Crop Age=7	Thin to 800 stems/ha
Crop Age=15	Thin to 550 stems/ha
Crop Age=30	Clearfell

Simulate

Results

Forecaster v0.99 | Scenario: 5301-43ea-4b54-247f82d202e6 | Simulation Start Time: 4/10/2017 12:47:43 p.m.

Condition (Age/Date/DOS)	Event (Prune/Thin/Clearfell)
Date = [Jun 2000]	Plant 1200 stems/ha, Specie: P.RAD
Crop Age=7	Thin to 800 stems/ha
Crop Age=15	Thin to 550 stems/ha
Crop Age=30	Clearfell

Simulate

Results:



Log Yield pdf



Annual Crop Condition pdf



Silvicultural Details pdf



Annual Crop Condition csv

Reports

Log Yield Report

Forecaster

ScenarioID: 57385ea-5301-43ea-4b54-247f82d202e6 | Simulation Start Time: 4/10/2017 12:47:43 p.m.

Project: I:\Projects\Calculator\30a35957-817b-4e53-9429-83a10a288797\Project

Crop: P.Rad

Site: I:\Projects\Calculator\30a35957-817b-4e53-9429-83a10a288797\Site

Regime: I:\Projects\Calculator\30a35957-817b-4e53-9429-83a10a288797\Regime

Function Set: I:\Projects\Calculator\30a35957-817b-4e53-9429-83a10a288797\FunctionSet

Cutting Strategy: I:\Projects\Calculator\30a35957-817b-4e53-9429-83a10a288797\FunctionSet

Clearfell at Age 30

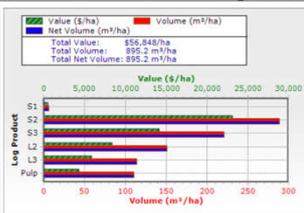
	Volume	Net Volume	Value	Logs	Log Volume	Log BCS	Log Length
	m ³ /ha	%	m ³ /ha	%	\$/ha	m ³ /log	m
S1	7.0	1	7.0	1	415	1	3
S2	229.6	31	229.6	31	21,195	41	632
S3	221.0	29	221.0	29	14,195	25	547
L2	191.4	17	191.4	17	8,477	15	357
L3	114.7	13	114.7	13	5,342	10	440
Prun	110.3	12	110.3	12	4,432	9	696
Total Recovered Vol	895.2	100	895.2	100	85,648	100	2,811
Total Recovered Vol	895.2	65	895.2				
Trim Allowance Waste			0.0				
Cutting Waste	27.3	3	27.3				
Total Extracted Vol	922.5		922.5				
Felling Waste	125.2	13	125.2				
Total Standing Vol	1850.7	100	1850.7				

Forecaster v0.99 | Page 1 of 2 | Prepared by melissa.evans@scionresearch.com.au

Log Yield Report

Forecaster

Clearfell at Age: 30.00



Log Product	Value (\$/ha)	Volume (m ³ /ha)
S1	7.0	7.0
S2	229.6	229.6
S3	221.0	221.0
L2	191.4	191.4
L3	114.7	114.7
Prun	110.3	110.3
Total	856.8	895.2

Forecaster v0.99 | Page 2 of 2 | Prepared by melissa.evans@scionresearch.com.au

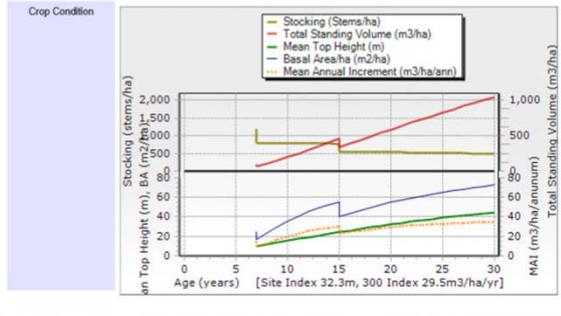
Reports

Crop Condition Report



Crop Condition Report

ScenarioID: b73db5ea-52c1-42aa-ab54-247c892e09e4 Simulation Start Time: 4/10/2017 12:47:43 p.m.
 Project: \Projects\Calculator\3ce35957-817b-4e53-9429-93e10e288797\Project
 Crop: \Sites\Calculator\3ce35957-817b-4e53-9429-93e10e288797\Site
 Site: \Sites\Calculator\3ce35957-817b-4e53-9429-93e10e288797\Site
 Regime: \Regimes\Calculator\3ce35957-817b-4e53-9429-93e10e288797\Regime
 Function Set: \Function Sets\Calculator\3ce35957-817b-4e53-9429-93e10e288797\FunctionSet
 Cutting Strategy: \Cutting Strategies\Calculator\Common\Domestic Radiata



Silvicultural Details Report



Silvicultural Details Report

ScenarioID: b73db5ea-52c1-42aa-ab54-247c892e09e4 Simulation Start Time: 4/10/2017 12:47:43 p.m.
 Project: \Projects\Calculator\3ce35957-817b-4e53-9429-93e10e288797\Project
 Crop: \Sites\Calculator\3ce35957-817b-4e53-9429-93e10e288797\Site
 Site: \Sites\Calculator\3ce35957-817b-4e53-9429-93e10e288797\Site
 Regime: \Regimes\Calculator\3ce35957-817b-4e53-9429-93e10e288797\Regime
 Function Set: \Function Sets\Calculator\3ce35957-817b-4e53-9429-93e10e288797\FunctionSet
 Cutting Strategy: \Cutting Strategies\Calculator\Common\Domestic Radiata

Site Productivity Indices

Height (Site) Index (m)	32.3
300 Index (m3/ha/annum)	29.5

Thinning Details

	Thin 1	Thin 2	Thin 3	Thin 4
Month Year	June 2007	June 2015		
Age (years)	7.0	15.0		
Scheduled On	Crop Ages=7	Crop Ages=15		
Thin Type	Waste Thin	Waste Thin		
Stem Selection	Residual Stocking 800	Residual Stocking 550		
Stem Ordering	SmallestDihdHeight(3.0)	SmallestDihdHeight(3.0)		
Stocking (stems/ha)	1196 - 396 = 800	771 - 221 = 550		
Basal Area (m2/ha)	25.00 - 8.02 = 16.98	55.68 - 14.98 = 40.70		
Q M Diam Before (mm)	163	303		
Q M Diam Removed (mm)	161	294		
Q M Diam After (mm)	164	307		
M Height Before (m)	9.8	23.9		
M Height After (m)	10.0	24.2		
M Top Height Before (m)	10.2	24.4		
M Top Height After (m)	10.3	24.5		
Thinning Coefficient	0.962	0.928		
Area Lost (%)				
Stems DBH >200mm (s/ha)	0	221		

Next Steps

- Site is ready for deployment
- Hosting costs and Go Live

The screenshots show the web application interface for the Forecaster Calculator. The top part displays a map of the site location with various parameters like Latitude, Longitude, Altitude, etc. The bottom part shows a detailed configuration panel for site parameters and thinning schedules, including options for thinning type, stem selection, and stocking levels.

The screenshot shows the desktop application splash screen for the Forecaster Calculator. It includes the application name, a brief description of its functionality, and a 'Get Started' button. The footer indicates the version number: © 2017 - Forecaster Calculator Application (version 0.00).

Forecaster Calculator Questions



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