

A Practical Advice DSS within Forecaster

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**FUTURE
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Leadership in forest and environmental management, innovation and research

SCION 
Next generation biomaterials

Overview

- The problem faced by industry
- Practical Advice Module
- What sort of advice?
- Software demonstration

The problem faced by industry

- As with any modelling system, results need to be considered in a wider context.
 - e.g. Forecaster may recommend a heavy thinning, even though the site is known to be windy and post-thinning windthrow is likely.
- However, the foresters with the experience to provide this context are often not the foresters using Forecaster.
- Staff turnover also contributes to loss of institutional knowledge from individual companies.

Captures a Wealth of Knowledge

- There is a huge body of research knowledge contained in FRI Bulletins, papers, WNIFR
 - The problem is that it is decentralised and disparate
 - It could be made more available to those who need it through a software implementation

Practical Advice DSS

- This module provides a means of storing advice, and exposing it to users when relevant.
 - When the conditions of their simulation meet pre-defined rules, the advice is displayed to the user.
- In addition to storing research-based advice, users can also enter company-specific advice based on their own knowledge.

What Sort of Advice?

- Climatic risk – wind, snow
- Forest health risk – pests, diseases
- Nutrition deficiency risks
- Fire risk
- Silvicultural advice – timing/severity of thinning/pruning
- Wood Quality problems

What Sort of Advice?

- A huge list of variables are available within Forecaster throughout the modelling process
- Forecaster also has a map interface which contains a number of spatial surfaces
 - When the user clicks on the map, values are obtained from each surface below.
- So, any variable which could be displayed spatially could potentially become available
 - e.g. Soil type, nutrition levels, fire risk

Example of Advice

- IF Latitude < -43.5 South AND
- Species = P.RAD AND
- Prune Age > 0 (i.e. crop has been pruned)
- THEN warn the user:
 - “Infection by Nectria flute canker may occur following pruning”
 - Plus provide link to Scion website - Forest Pest Fact Sheet