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Water Use Efficiencies - Help Note

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Introduction

This document explains how to setup Water Use Efficiencies in PAM software and record information to generate Water Use Efficiency reports. Water Use Efficiency reports give information on how much water has been used to grow a certain amount of produce.

PAM Water Use Efficiency reports and graphs can incorporate the applied water (irrigations) as well as the moisture available at planting and rainfall into those reports and graphs.

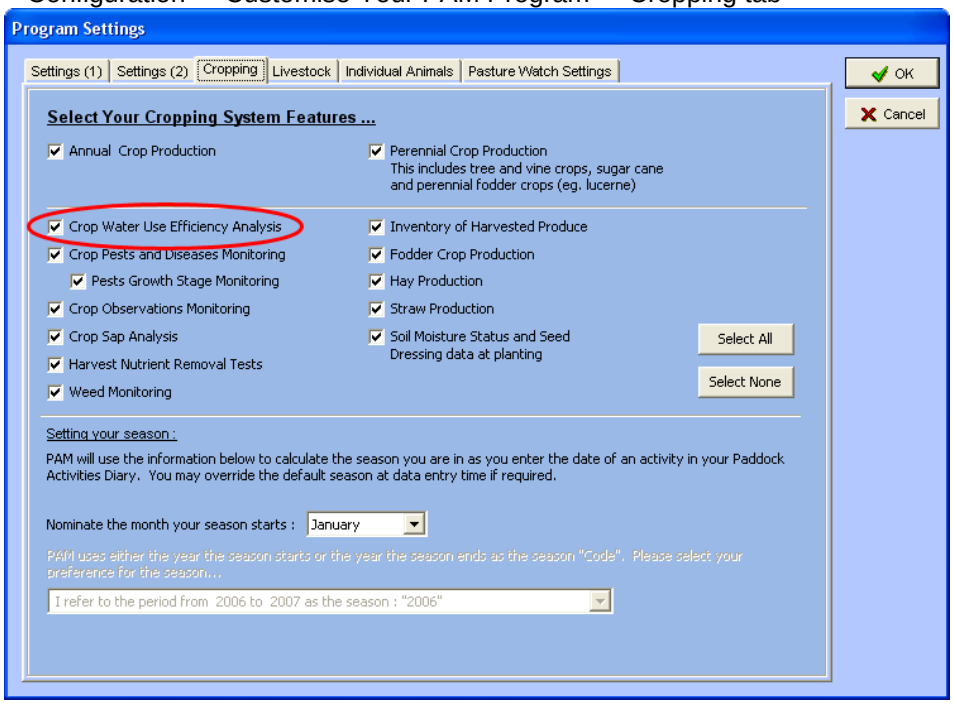
Software Includes:

- PAM QA Plus
- PAM UltraCrop
- PAM AusVit

Activation

Turn on Water Use Efficiencies feature

Configuration -> Customise Your PAM Program -> Cropping tab ->



Activated Features:

Configuration:

'Growing Season Information' button is now available in the Crop Setup screen (Configuration -> Crop Types and Associated Lists & Settings)

Reporting:

Annual Crop Summary Report now shows Water Use Efficiency calculations.

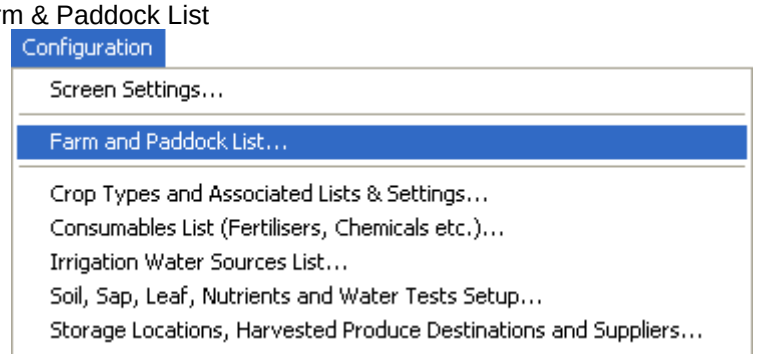
Crop Graphs:

- $/mm Available Water Comparison
- % of Potential Yield
- Water Use Efficiency Comparison
- Water Use Efficiency vs Yield

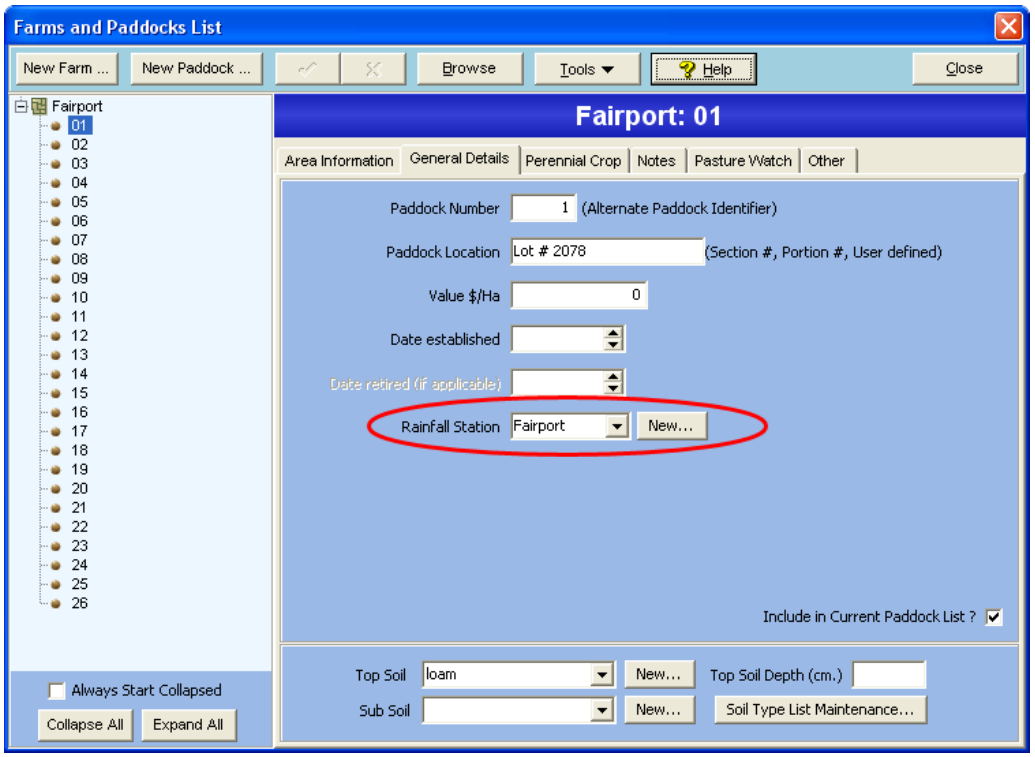
Configuration:

Assign Rainfall Stations to Paddocks:

Configuration -> Farm & Paddock List



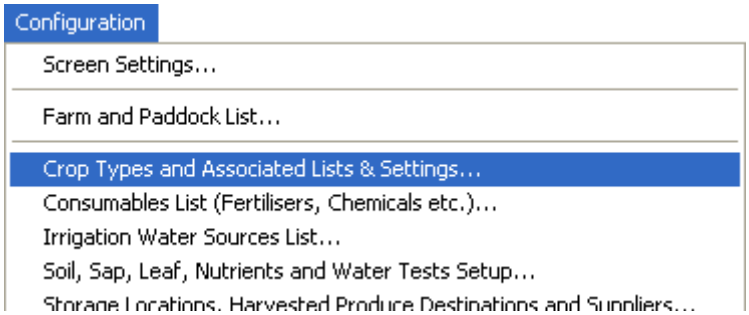
On the General Details tab select the rainfall station that has the rainfall recorded for that Paddock:

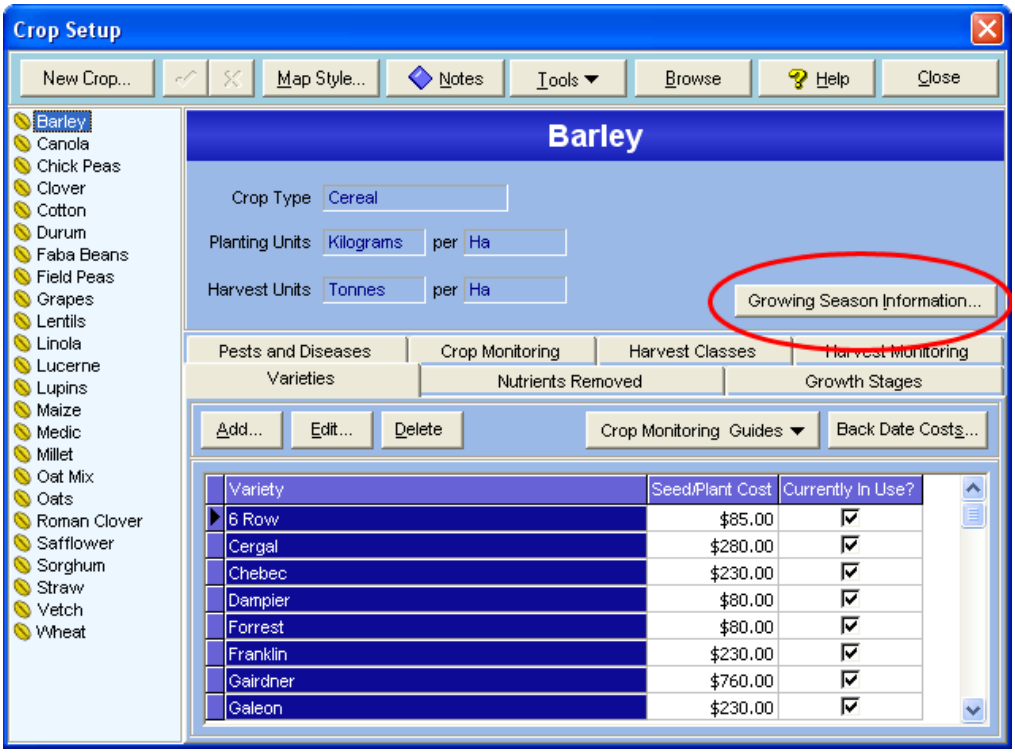


If the rainfall station is not in the list, then simply click the ‘New’ button next to the rainfall station selection list and type in the name of the new rainfall station.
This is done so that any rainfall recorded against that rainfall station is applied to the selected paddock.
There can be only one rainfall station selected for an individual paddock.

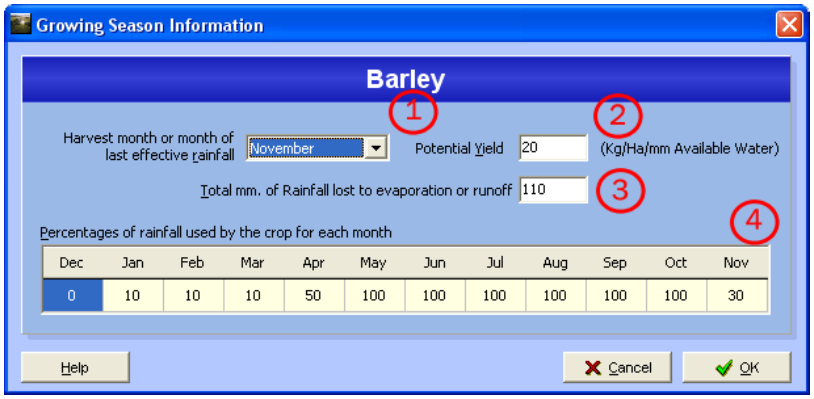
Set Up Growing Season Information:

Configuration -> Crop Types and Associated Lists & Settings…





Select the crop that we will be setting up the Growing Season Information for, then click the  button.



Some of the information required for this screen will need to come from your agronomist or your local Department of Primary Industries

1 Select the month of last effective rainfall for the cropping season

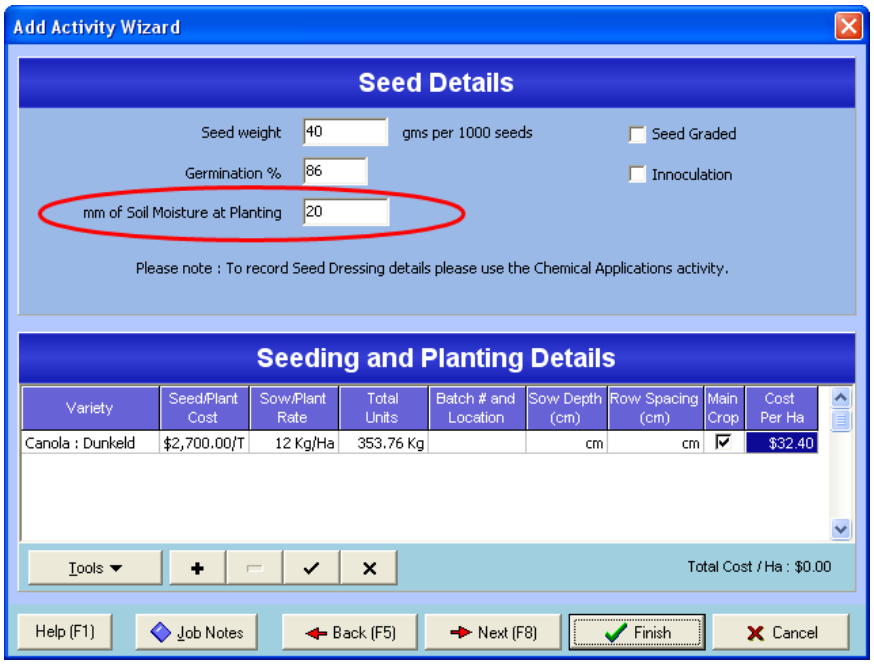
2 Enter the Potential Yield in Kg/Ha/mm of available water

3 Enter the amount of rainfall that will be lost due to runoff or evaporation during the season

4 For each of the months, click in the yellow field and type in the amount as a % of the water that the crop will use for that month. For instance, a newly sown crop will use less water than one 1/3 of the way through the growing cycle.

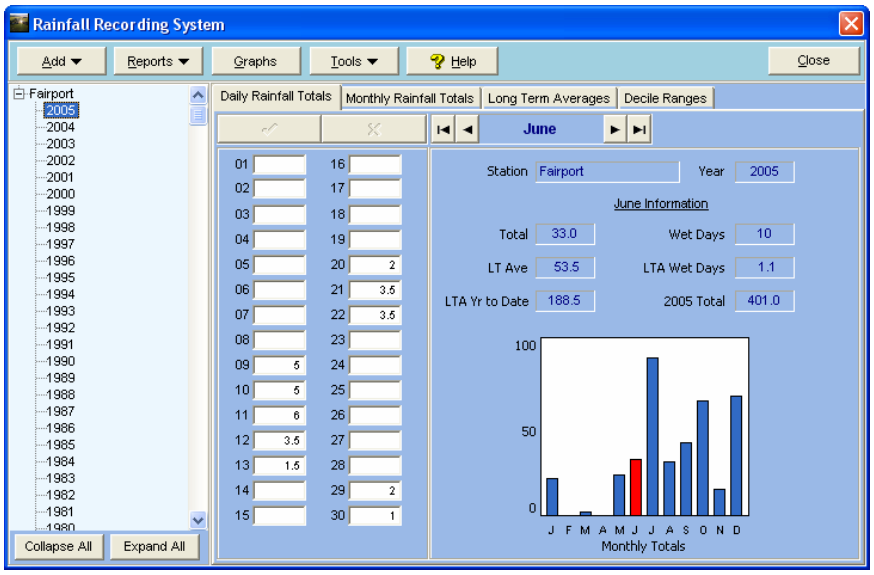
Data Entry Examples:

Seeding and Planting



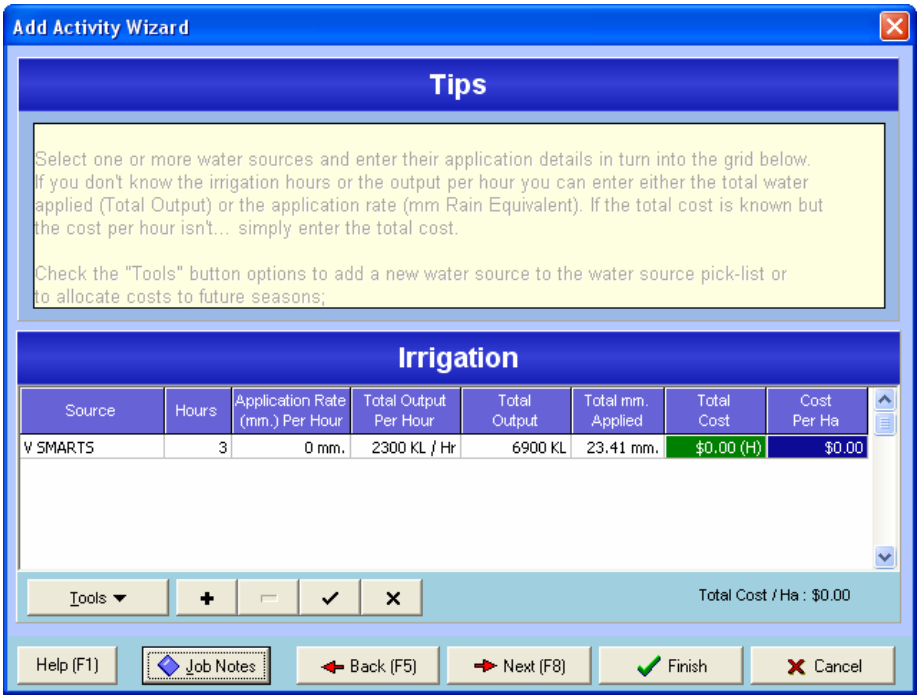
During the Seeding and Planting operation, by entering the soil moisture at planting, this available water will be used in the Water Use Efficiency calculations.

Rainfall



To ensure accurate Water Use Efficiency reports, keep your rainfall records up to date.

Irrigation



To ensure accurate Water Use Efficiency reports, keep your irrigation records up to date.

Reporting:

Preformatted Text Reports

Annual Crop Summary Report

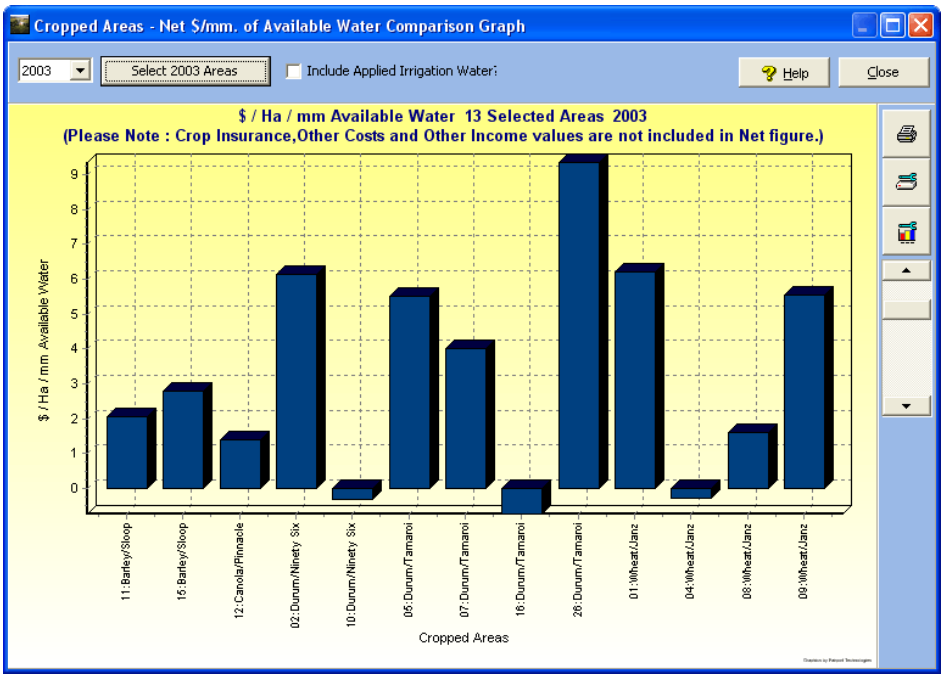
In the Annual Crop Summary Report the Water Use Efficiency information is available at the bottom of each of the crops available for the selected seasons:

Water Use Efficiency and Potential Yield details

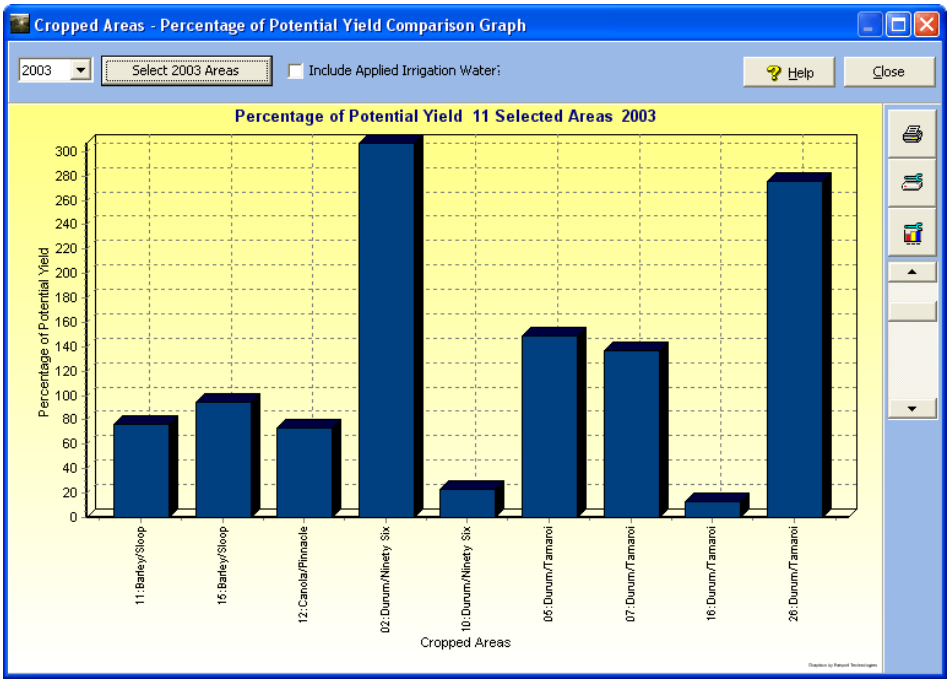
Available Water:	319.85mm.
$ / Ha / mm:	$1.03 / Ha / mm
Total Yield:	70.00
Total Yield per Ha:	2.37
Break even Yield per Ha:	0.79
Potential Yield:	6.40 T / Ha
Percentage of Potential Yield:	37.1%
Water Use Efficiency:	7.42 Kg / Ha / mm

Graphs and Charts

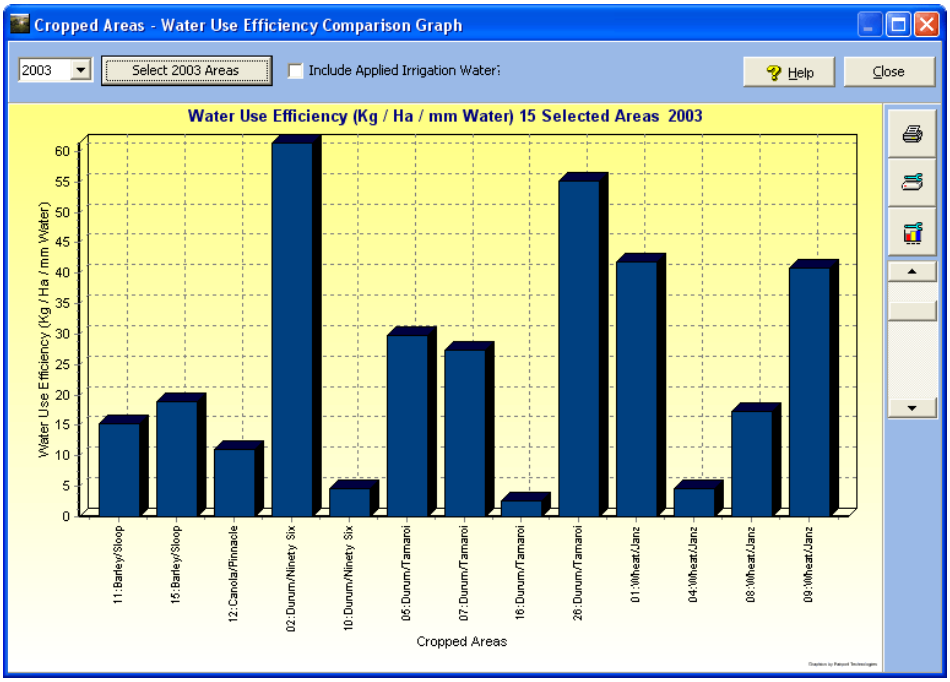
$/mm Available Water Comparison



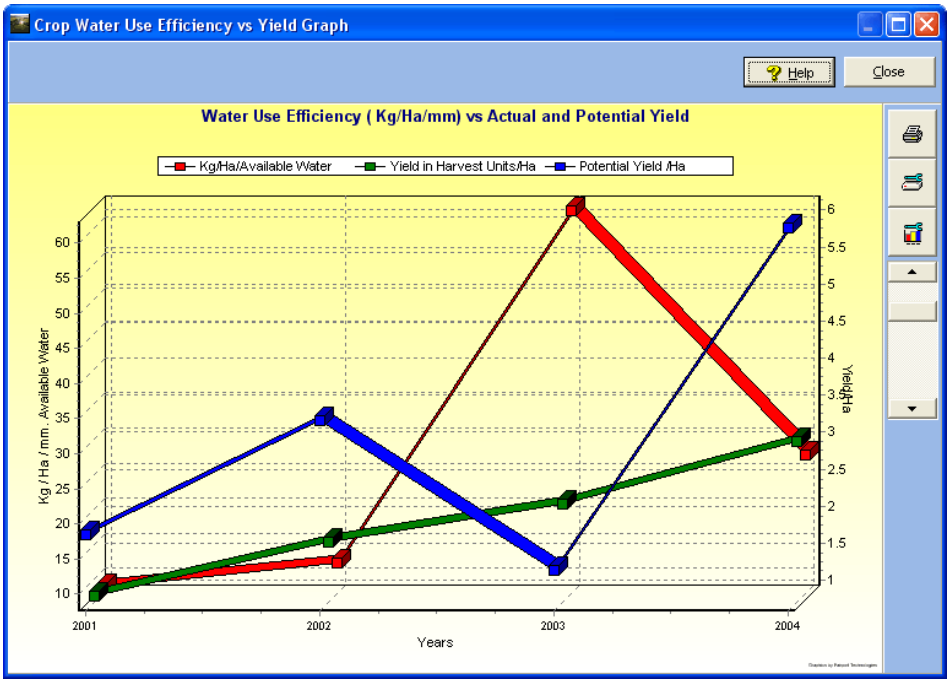
% of Potential Yield



Water Use Efficiency Comparison



Water Use Efficiency vs Yield



Under The Hood

Available Water = Monthly Rainfall x Percentage of that Month for each month in the period from User defined starting month until user defined ending month
LESS Loss to Run off and Evaporation
+ Any Irrigation water (if user chooses)
+ Any Stored Moisture (Entered while recording a planting)

Potential Yield = Available Water x T/Ha/mm (User defined amount)