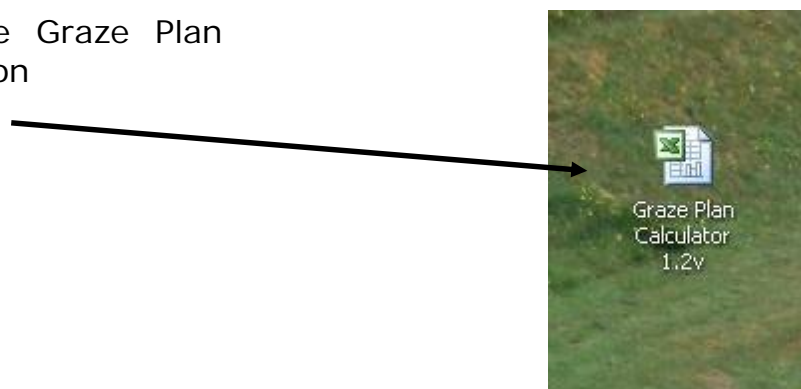


## Preparing a Grazing Plan with the Graze Plan Calculator<sup>®</sup>

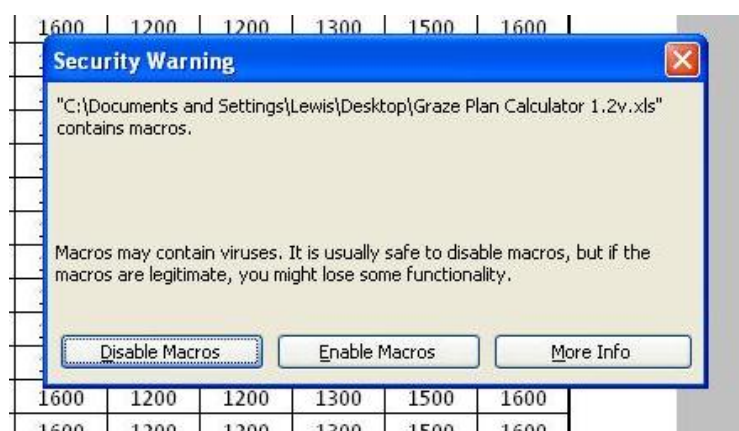
The Graze Plan Calculator is a computer program that utilises EXCEL<sup>®</sup> to help you develop your grazing plan, record grazing movements, determine pasture growth rates and explore future seasonal scenarios. This program will soon (expect April 2009) be replaced by software being developed by AIMS, which installs on your computer and does not utilise EXCEL<sup>®</sup>. However, the concepts of the program that are explained in this document will remain very similar.

### 1. Starting the Graze Plan Calculator

Double click on the Graze Plan Calculator EXCEL<sup>®</sup> icon



The program will open but depending on the security settings on your computer you may get this message on your screen.



If this screen appears follow the instructions to enable Macros for either Excel 2003 or Excel 2007.

### How to enable Macros in Excel 2003

- 1 - Click the Tools menu, and choose Options
- 2 - Click the "Security" tab.
- 3 - Click the "Macro Security" button
- 4 - Set Macro Security to either Medium or Low.

If you have a virus scanner program on your computer, it will protect you from macro viruses, so changing this setting is quite safe.

Once done, close and re-open this file.  
Click "Enable Macros" if the computer asks you.

### How to enable Macros in Excel 2007

- 1 - Click the "Office" button.  
(It's the round button in the top left corner)
- 2 - Click "Excel Options:"
- 3 - Click "Trust Centre" in the left panel
- 4 - Click "Trust Centre Settings" button
- 5 - Click the "Macro Settings" button
- 6 - Choose "Disable All Macros with Notification" then click OK

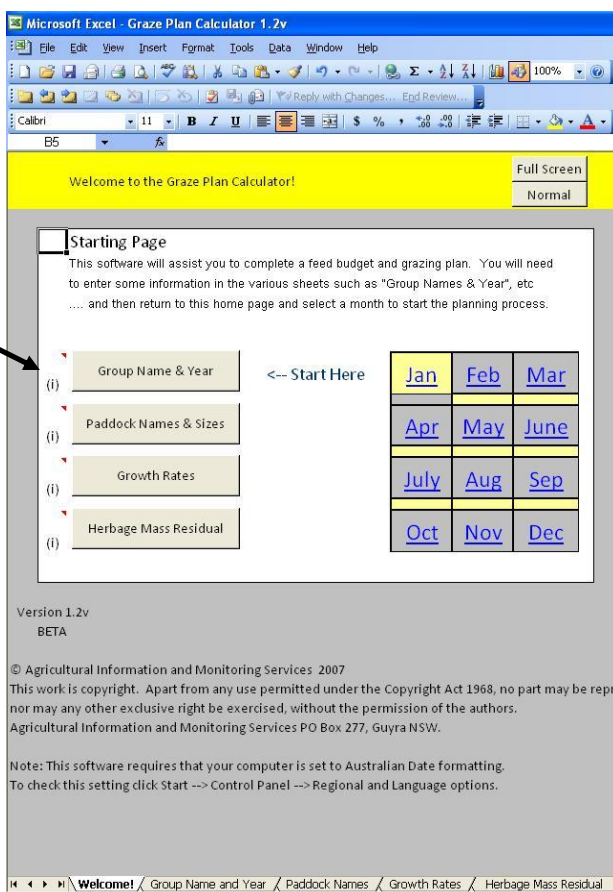
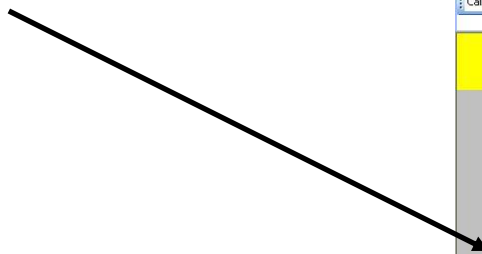
Close and re-open this file.

Note: You will need to click the "Enable Macros" button at the top of the screen whenever you open this file unless you choose to always enable macros.

## **2. Opening screen of the Graze Plan Calculator**

This opening screen shows the features of the program and indicates the information that is required to be entered into the program.

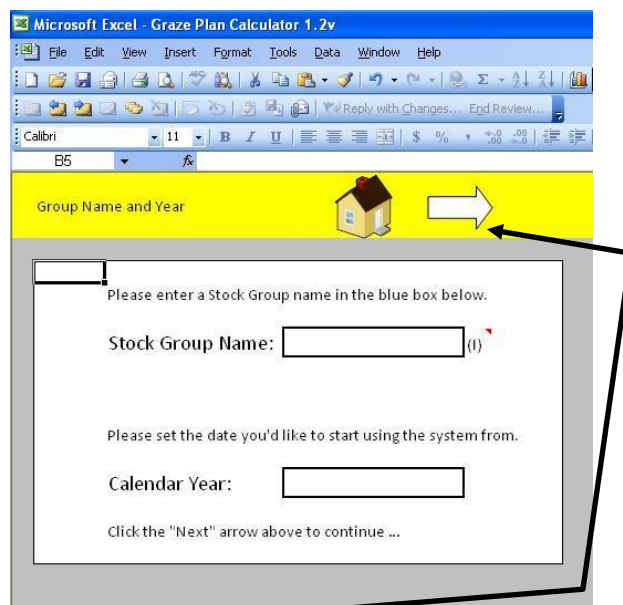
The first action is to mouse click on the Group Name & Year button.




### 3. Entering Group Name & Year

Type the name of the mob into the Stock Group Name box and click the Enter button. If you have 2 separate mobs then nominate just 1 of these here.

Type the calendar year into the box and click the Enter button.



When completed, mouse click on the arrow to proceed to the next page. Mouse clicking on the House  will return you to the opening screen as in point 2 above, where you would then mouse click on the Paddock Names & Sizes button.

#### 4. Entering Paddock Names and Sizes

Type the name of each paddock into the Paddock Names column (an example of dam paddock is provided). It is worthwhile having the paddocks entered in the approximate order that stock generally graze. Type the area (ha) of each paddock into the Paddock Sizes column. As you do this the Ha sign will automatically be added by the program.



Microsoft Excel - Graze Plan Calculator 1.2v

File Edit View Insert Format Tools Data Window Help

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G10 =

Formula Bar

Paddock Names and Sizes  

Now we need some paddock names and sizes

Paddock Names:	Paddock Sizes:
dam paddock	12.0 Ha

When completed, mouse click on the arrow to proceed to the next page. Mouse clicking on the House  will return you to the opening screen as in point 2 above, where you would then mouse click on the Growth Rates button.

## 5. Entering Daily Pasture Growth Rates

This page is where you will either select the nominated pasture growth rates for each month or enter your own customised values. If you do not have any customised values then accept the nominated values as a start.

To accept the nominated values ensure the drop down box has Tablelands selected. The values in the yellow cells are the nominated values for each month. For example, 30 kg DM/ha/day for January and reducing to 5 kg DM/ha/day for May and 0 kg DM/ha/day for July.

The paddock names that you had previously entered will be displayed in the first column (where the example of dam paddock is located). If you have paddocks that you suspect are significantly better or worse than 'average' then you will need to manually alter the values in the corresponding row.

Microsoft Excel - Graze Plan Calculator 1.2v

File Edit View Insert Format Tools Data Window Help

Calibri 11 B I U

C5 Now for a tricky bit. We need to try to work out what our monthly growth rates will be.

Daily Pasture Growth Rates (kg DM/ha/day)  
Average Daily Pasture Growth Rates per Month

Now for a tricky bit. We need to try to work out what our monthly growth rates will be.  
Note: You can use default values for Coastal or Tablelands using the dropdown box below "Name"

Of course, we can't predict the future all that well, so you only need to fill in estimates for the months that you want this system to calculate for.

Name	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
Tablelands	30	25	15	10	5	0	0	0	5	15	35	30
dam paddock	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30
	30	25	15	10	5	0	0	0	5	15	35	30

When completed, mouse click on the arrow to proceed to the next page. Mouse clicking on the House icon will return you to the opening screen as in point 2 above, where you would then mouse click on the Herbage Mass residual button.

## 6. Entering Herbage Mass Residual

This page is where you will select Herbage Mass Residual values for each paddock. Residual values are the amount of feed (herbage mass) that you want left in the paddock after grazing. Select the nominated Herbage Mass Residual values for each month or enter your own customised values. If you do not have any customised values then accept the nominated values as a start.

To accept the nominated values ensure the drop down box has Tablelands selected. The values in the yellow cells are the nominated values for each month. For example, 2100 kg DM/ha/day for January and increasing to 2300 kg DM/ha/day for May and reducing to 1600 kg DM/ha/day for July.

The paddock names that you had previously entered will be displayed in the first column (where the example of dam paddock is located). If you have paddocks where you want to change the Herbage Mass Residual (for example wanting to graze lower prior to spraying, or wanting to give extra rest) then you will need to manually alter the values in the corresponding row.

Microsoft Excel - Graze Plan Calculator 1.2v

File Edit View Insert Format Tools Data Window Help

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O11 =O\$10

Herbage Mass Residual (kg DM/ha)

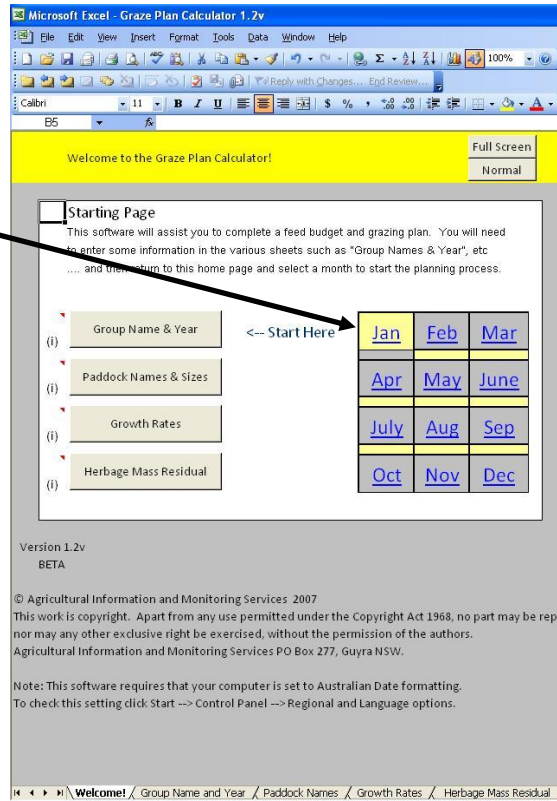
Here you are asked to specify how much pasture you want to be left behind after grazing.  
 Note: You can use default values for Coastal or Tablelands using the dropdown box below "Name"

Name	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09
Tablelands	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
dam paddock	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800
	2100	2300	2500	2500	2300	1600	1600	1200	1200	1300	1500	1800

When completed, mouse click on the arrow to return to the opening screen. Mouse clicking on the House icon will also return you to the opening screen as in point 2 above.

## 7. Developing the Graze Plan

Mouse click on the current month to take you to the screen where you will develop your Graze Plan.



Start developing the Graze Plan by entering the total DSE value of the mob into the yellow cell. For example, if the mob was 500 Merino ewes with lambs, the total DSE value would be 500 ewes x 2 DSE/ewe & lamb unit = 1,000 DSE. Alternately, the mob may be 100 steers (300 kg) growing at 1 kg/day, which is also a total DSE of 100 x 10 = 1,000 DSE.

0			Starting DSE	1000	1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000													
January	Rainfall	8	(millimetres)	8	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed
on Paddock	Grazing Days	Max	Current	Herbage Mass Start Residual	01	02	03	04	05	06	07	08	09	10	11	12	13	14
dam paddock		7	4	2500 2100	1	1	1	1										
corner		2	2	2300 2100					1	1								
ridge		1	0.5	2200 2100	2330	2360	2390	2420	2325	2230	2260	2290	2320	2350	2380	2410	2440	2470
radish		4	4.5	2600 2100	2230	2260	2290	2320	2350	2380	2360	2390	2420	2450	2480	2510	2540	2570
				2100	2630	2660	2690	2720	2750	2780	2743	2640	2537	2433	2330	2360	2390	2420

Next, you will need to enter the Herbage Mass of each paddock into the yellow cells corresponding for each paddock. This is the herbage mass that is available at the start of January.

0		Starting DSE	1000	Stocking Rate	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
January	Rainfall	8	(millimetres)		8												
Paddock	Grazing Days	Herbage Mass			Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
	Max	Current	Start	Residual	01	02	03	04	05	06	07	08	09	10	11	12	13
dam paddock	7	4	2500	2100	10.8	1	1	1	1								
corner	2	2	2300	2100	8.1					1	1						
ridge	1	0.5	2200	2100	1.6						0.5						
radish	4	4.5	2600	2100	19.4							0.5	1	1	1	1	
				2100													

The number of days available for grazing in each paddock is calculated by the program and shown under the Grazing Days Max column. For example, 7 days during January in dam paddock, 2 days in corner, etc. This is calculated from the information you have provided of starting herbage mass, herbage mass residual and total DSE. It is calculated at the start of each month and does not take account of pasture growth during the month.

Allocate the mob to graze in a paddock by entering the value of **1** into a cell. This value means that the entire mob grazed the paddock for the whole day. A value of **0.5** (such as for ridge and radish paddocks on 7<sup>th</sup> January) indicates that the entire mob grazed each paddock for half a day. If we had entered a value of **0.5** for 7<sup>th</sup> and **0.5** for the 8<sup>th</sup> of January, this would generally indicate that the mob was split into 2 even mobs and each mob grazed each paddock on the 7<sup>th</sup> and 8<sup>th</sup> of January. The grazing days for each month are added and displayed by the program.

0		Starting DSE	1000	Stocking Rate	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
January	Rainfall	8	(millimetres)		8												
Paddock	Grazing Days	Herbage Mass			Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
	Max	Current	Start	Residual	01	02	03	04	05	06	07	08	09	10	11	12	13
dam paddock	7	4	2500	2100	10.8	1	1	1	1								
corner	2	2	2300	2100	8.1					1	1						
ridge	1	0.5	2200	2100	1.6						0.5						
radish	4	4.5	2600	2100	19.4							0.5	1	1	1	1	
				2100													



Note that as each days grazing sums to 1 the pink colour of the date disappears, indicating that you have correctly completed the plan for that day. If the date remains purple in colour, then the days grazing values have summed to less than 1 (meaning, the mob has grazed less than is possible). If the date becomes red in colour, the days grazing values have summed to more than 1 (meaning the mob has grazed more than is possible).

If the Current grazing days for the month becomes purple in colour, this indicates that you have grazed the paddock for longer than the program indicated. This may be a mistake and needs correcting or it may be that the pasture has grown within the month to allow you to take more grazing time without grazing below the nominated Herbage Mass Residual.

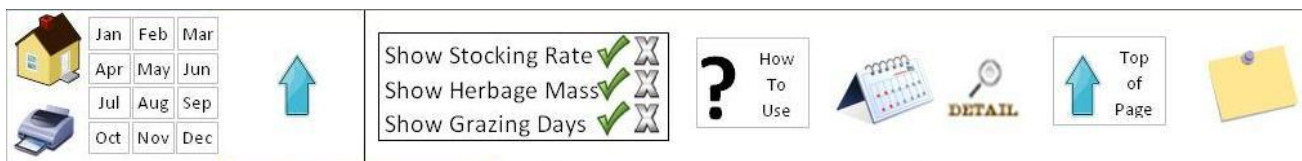
		Jan	Feb	Mar																								
		Apr	May	Jun																								
		Jul	Aug	Sep																								
		Oct	Nov	Dec																								
0	Starting DSE	1000																										
January	Rainfall 8 (millimetres)	8																										
on Paddock	Grazing Days	Herbage Mass													Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed
	Max Current	Start Residual	Stocking Rate	01	02	03	04	05	06	07	08	09	10	11	12	13	14											
dam paddock	7 4	2500 2100	10.8	1	1	1	1																					
corner	2 2	2300 2100	8.1					1	1																			
ridge	1 0.5	2200 2100	1.6	2330	2360	2390	2420	2325	2230	2260	2290	2320	2350	2380	2410	2440	2470											
radish	4 4.5	2600 2100	19.4	2230	2260	2290	2320	2350	2380	2360	2390	2420	2450	2480	2510	2540	2570											
				2630	2660	2690	2720	2750	2780	2743	2640	2537	2433	2330	2360	2390	2420											


The values in grey below the grazing plan code (ie. values of 1 or 0.5, etc) are the estimates of herbage mass on each day. For example, dam paddock is estimated to have 2447 kg DM/ha on the 1<sup>st</sup> of January, 2317 kg DM/ha after grazing on the 5<sup>th</sup> and 2587 kg DM/ha on the 14<sup>th</sup>.

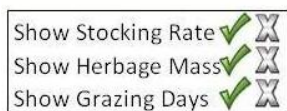
Continue allocating the mob to paddocks until the month is completed. When this is done, mouse click on the next month to continue with the grazing plan.



Mouse clicking on the icons at the top of the screen allows you to:



 Returns the cursor to the 1<sup>st</sup> day of the month for the first paddock.



Displays (tick) or hides (cross) the values for Stocking Rate (monthly average for each paddock), Herbage Mass and Grazing Days.



Provides either a summary view (without daily herbage mass values) or a detailed view for each month.



Allows you to enter a note on a particular day. For example, when you are planning to wean animals or when you have drenched. Mouse clicking on this icon will take you to the note section for the 1<sup>st</sup> of the month.



The House returns you to the opening page. The Printer provides a summary of each months grazing plan on the screen and able to be printed to paper. The calendar of months allows you to move between the months of the year.