

Instructions for growers to login and use the AQUAMAN program

1. **Open the website** <http://www.apsim.info/apsim/aquaman/> (We suggest you turn off pop-up blockers if they are installed on your computer before you open the website)
2. **Enter user ID**
3. **Enter password**
4. **Click the login button while pressing the ‘CTRL’ key**
5. **Enter the weather data in the ‘Enter all data’ window** Enter (format:dd/mm/yyyy) or select a date in the date column and enter maximum and minimum air and soil temperatures, rainfall and irrigation in the respective cells. Both maximum and minimum temperatures should be entered for a given day or leave the cells for both as blank. Enter any observation such as observed crop stage, harvest time and yield in the observation column against the date it was recorded or leave it blank too.
6. **After entering the set of data click the word “Save”** Ensure that you are able to see the ‘hour glass’ icon as an indication of data being saved. If you do not see this, click the ‘save’ word again.

After successfully entering all the data then:

7. **Click the word “Create Report”** on top right of screen. A box that allows the selection of the AQUAMAN option will appear.
8. **Click (select) “AQUAMAN for irrigation scheduling in peanuts”**
9. **Click the button “Create Report”** located below this box.
10. **Type in the report name**
Give the report a name. We suggest you enter a name to identify your paddock if you are scheduling irrigation in more than one paddock. The date and time of report is automatically generated by AQUAMAN.
- 11 **Click the word “OK”** at the top of the window.

The program then pops up a box which says “Your request for a report has been submitted. You will be informed via an email once it has been generated”.

This is exactly what happens. Reports can take just a few minutes to a few hours depending on how many people including DPI&F staff are using a bank of computers that runs the model. Most of the times the report is generated in under 5 minutes.

12. Logout of AQUAMAN by clicking on the “X” at the top right as normal if you wish

When you get the Email that says your report is ready then

13. Login to AQUAMAN as set out in 1,2,3,4 above.

14. Click on the ‘Reports’ (on the left hand margin of the screen), and maximize the window to enable the full view and printing of a report on an A4 size paper.

A list of reports appears. Your latest report will be at the top.

15. Click on the report name you want to see.

16. Click on the word “Show” at the top of the screen.

The report with data in a graphical format is displayed and you can either save it on your computer hard drive or print it by right clicking on the image and selecting an appropriate option from the context menu, or do what you want from the menu bar at the top of the report.

17. After you have finished with the report then log out of the program as normal

18. Interpreting the reports (See the example of a report given below). An AQUAMAN report tells you when and how much water need to be applied to the peanut crop you are growing. Largely the operative graph that shows you what is happening in your crop is the bottom graph. This shows the available water status in the effective root zone of your crop on a daily basis based on the data you have entered. The whole idea is to keep the red line of the graph above the grey refill line. This grey refill line represents the lowest level you should deplete soil moisture down.

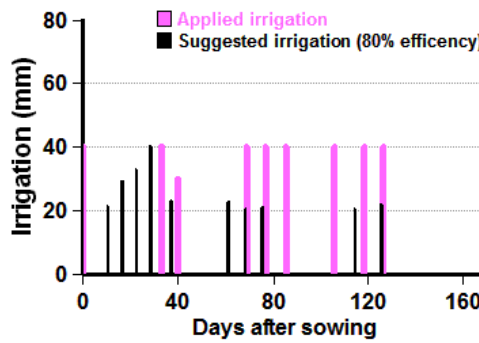
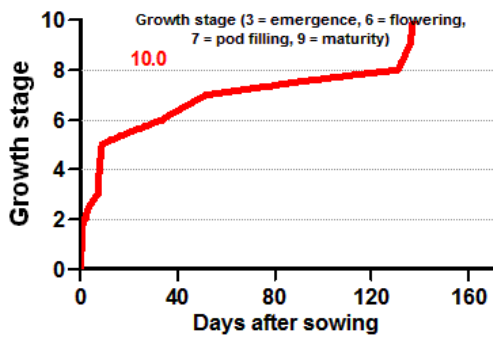
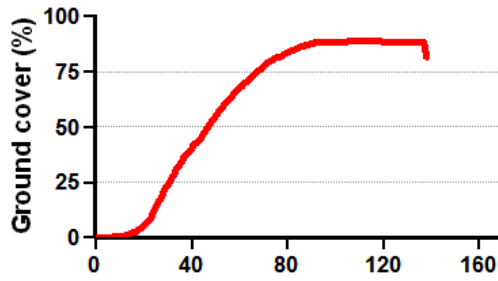
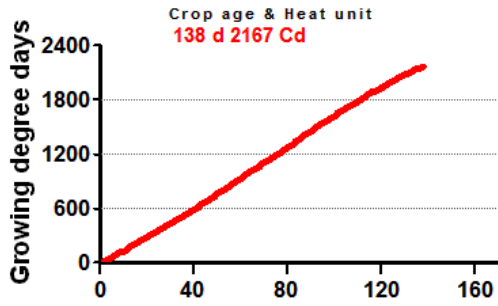
The statement ‘approximate days to next irrigation’ on the top left of the lowermost graph tells you when irrigation is needed. If your report tells you that the next irrigation is due in 2 days, then irrigate on the day of report generation as the report is up-to-date until two days before the date of its generation (due to a limitation of the SILO weather data availability for the AQUAMAN program). If the report says the next irrigation is due in 5 days, then inspect your field in about 2-3 days from the date of the report generation to decide about the next irrigation.

The same graph also shows rainfall and applied irrigations, and the statement ‘Water use mm/day (weekly avg.)’ on the top right.

The top left graph shows the number of growing degree days (GDD) reached. So when this number reaches 2200 for runner varieties then you need to start checking your crop for maturity, but this can vary with the variety and other factors, and is only a guide for you to start checking plants for maturity). The top right graph shows the percent ground cover. The middle chart on the right shows the amount of irrigation applied and suggested irrigations.

Grower = ABC ; Paddock = Paddock_A

Date of report
14/04/2006



Approximate days to next irrigation
3

Water use mm/day (weekly avg.)
2.3

