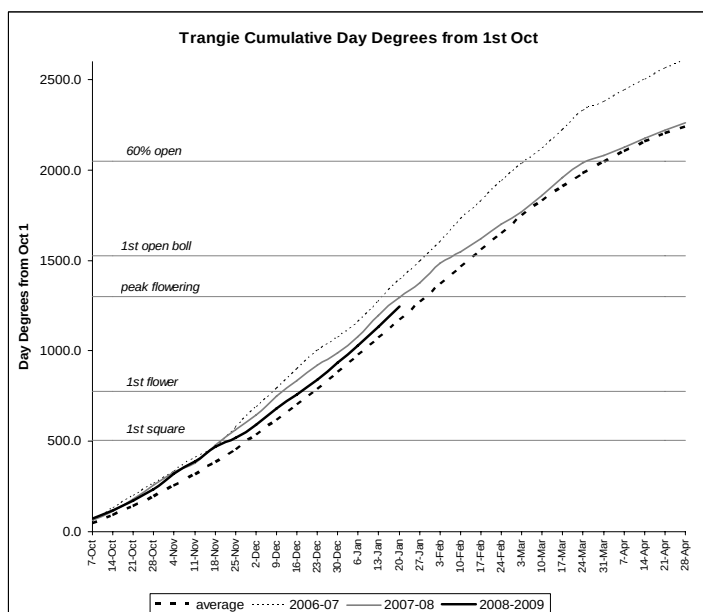




Period	Day degrees	Cold Shock	Hot Days
15 – 30 th Sep 08	100.6	12	
1 st Oct 08– 19 th Jan 09	1244	21	10

Macquarie Valley Crop Update

Approximately 4800ha of cotton has been planted in the Macquarie this season. Growing conditions since Christmas have been excellent with warm, clear days seeing the cotton grow considerably during the last couple of weeks.

Most crops are approaching 20 - 21 nodes with the majority looking to cut out over the next 7 days. Fruit retention has been very high all season (above 90%).

Insect pressure from sucking pests has been very light with the majority of Bollgard II® crops not receiving an insecticide spray as yet.

Heliothis pressure was light early season, but has been fairly moderate and constant since Christmas. Conventional crops have received, on average, 6 insecticides. At this stage, there have been no reports of above threshold numbers of heliothis survivors in Bollgard II® cotton.

Unfortunately, a number of crops in the region have been affected by 2,4-D herbicide drift with varying degrees of damage from lightly affected to very significant yield losses expected.

If the current weather trends of clear, warm days continues for the rest of the season then yield potential of crops not affected by 2,4-D herbicide damage should be high.

Last effective flower and cut out dates

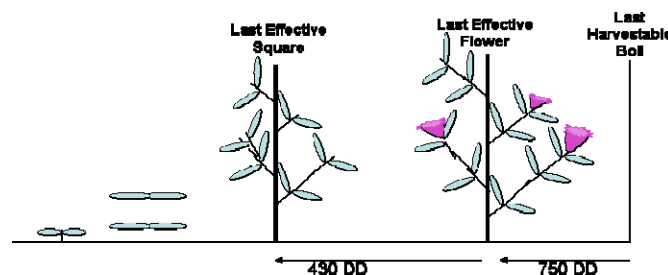
The date of the **Last Effective Flower** can be used to determine target cutout dates by enabling the manager to time cutout based on Nodes Above White Flower (NAWF). Cutout occurs when NAWF equals 4 or 5. Physiological cutout is described as the time when production of new fruiting site/square ceases and can be

estimated using the date that represents the time of last effective square.

The **Last Effective Flower Tool** (LEFT) is available at <http://www.cottassist.cottoncrc.org.au/LEFT/>

The LEFT uses temperature data and day degree targets for boll period (flower to open boll) and square period (square to flower) to estimate the date of the last effective flower in a season that will contribute to a harvestable boll.

The LEFT works on the principle that it takes 430 day degrees for a square to become a flower and 750 day degrees for a flower to become a mature open boll (below).



To use the LEFT, simply select your nearest weather station, and define the date of the last harvestable boll and click Run Simulation. The date of last harvestable boll can be defined in one of two ways:

By Temperature - the time of the first frost can be defined by setting a daily minimum temperature. A minimum temperature of 2°C in a weather station equates approximately to a frost on the ground surface. The LEFT will scan the historical dataset to determine the first day (from 1st Jan through to 30th Jun) which reached this minimum temperature.

By Date - a calendar date can be entered to define when the last harvestable boll will open. The output provided by the LEFT includes the earliest, the latest, and the average date, on which the last effective square, flower and harvestable boll occurs.

The following table shows the LEFT results for the Macquarie Valley by a selected date.

For a crop to be ready to harvest by 15th April, on average in the Macquarie the last effective flower will occur on the 5th Feb and the latest this will occur is the 14th Feb.

	Last Effective Square	Last Effective Flower	Last Harvestable Boll
Average	04-Jan	05-Feb	15-Apr
Earliest	22-Dec	23-Jan	15-Apr
Latest	17-Jan	14-Feb	15-Apr

Changing the date of harvest (late harvestable boll) will result in changes to the last effective flower date, allowing a manager to time the crop cut out based on when they want to harvest to occur or by the date of the first frost.