For a complete guide to cotton management, see the Australian Cotton Production Manual 2017.

A gross margin represents the difference between gross income and the variable costs of producing a crop. Gross margin budgets do not take into account risk, overhead costs (including permanent labour) and do not calculate farm profit. Industry budget should be used only as a guide. They are designed to give an indication of operations and costs required to grow a cotton crop. A grower should alter create their own budgets to take into account individual field management plans, movements in crop and input prices and changes in seasonal conditions. In all instances, operations should be tailored to the requirements of individual paddocks. Following is an explanation of some terms and an outline of the assumptions used the creation of the 2017-18 cotton industry gross margin budgets;

**BALE**: The industry term 'per bale', is in reference to a ginned 'lint' bale of 227kg. New picking technology picks the cotton and packs it into round modules on-farm, which is then transported to the gin.

**Bt**: A licence fee is paid to Monsanto for cotton seed that uses Bollgard® technology (Bt). The technology licence fee for Bollgard3® stacked with Roundup Ready Flex® for 2017-18 is $390 per green hectare (GST exclusive). The fully irrigated budgets use Monsanto Cotton ChoicesTM Option 1, which provides a discount on the technology licence fees for up-front payment. The semi-irrigated budget uses option 2, which includes the option of 'Late Crop Removal', $420 per green hectare. For crops expected to yield less than 4 bales/ha the End Point Royalty is the most cost effective option. The dryland budget uses Monsanto Cotton ChoicesTM Option 3, an end point royalty of $52.50/bale ex GST. See [http://cottonchoices.com.au](http://cottonchoices.com.au) to find the option that best suits your cropping situation.

**CARTAGE**: Assumptions made for module cartage are: property distance from the gin 50km, road train carting 12 round modules per trip, 4.25 lint bales per round module.

**CHEMICALS**: Always read chemical labels and follow directions, as it is your legal responsibility to do so. Use of a particular brand name or active ingredient does NOT imply a recommendation.

**CROP DESTRUCTION / PUPAE DESTRUCTION**: To further mitigate resistance follow the specific guidelines in your licence agreement.

**DEFOLIANT**: Good conditions are required to get the best performance. The choice of defoliant and rate used depends on the moisture status of the plant and seasonal conditions. Self propelled ground rig is used in this example due to improved canopy penetration, however there can be trade-offs with damage to the crop.

**FERTILISER REQUIREMENTS**: All fertiliser strategies should include comprehensive soil testing prior to sowing. Refer to recommended soil testing procedures in the Australian Cotton Production Manual, 2017.

**HERBICIDES**: The cornerstone of weed management and managing herbicide resistance risks is controlling survivors and preventing new weed seeds from entering the seed bank. To reduce the likelihood of herbicide resistance, rotate herbicide groups and weed management techniques. Chipping or spot spray can be used to control any surviving weeds as part of a robust Integrated Weed Management (IWM) plan. Aim to plant
INTRODUCING INTO CLEAN FIELDS. SEE THE HERBICIDE RESISTANCE MANAGEMENT STRATEGY (FOUND IN THE COTTON PEST MANAGEMENT GUIDE) AND MONSANTO'S ROUNDUP READY FLEX COTTON WEED MANAGEMENT GUIDE.

INTEGRATED PEST MANAGEMENT: Insecticides and spray timing suggested in this budget are examples only and strategies will vary with individual circumstances. Individual paddocks need careful monitoring to determine pest and beneficial insect populations. Use recommended thresholds for all pests. Avoid using broad spectrum sprays and continuously using chemicals from the same group. Follow the Insecticide Resistance Management Strategy (found in the Cotton Pest Management Guide) to protect the value of insecticide technologies for the future. Conserving and utilising beneficial insects is a key aspect of long-term effective pest management.

LABOUR: Labour costs an estimated $250-$300/ha. Labour is assumed to be an overhead cost and not included in this budget.

LEVIES: The Research Levy ($2.25/bale) is a compulsory levy that is invoiced by the ginning organisation following ginning. The Cotton Research Development Corporation (CRDC) uses funds collected through this levy to finance vital industry research. The Cotton Australia Levy ($1.65/bale) is a voluntary levy, which funds the peak industry body Cotton Australia that provides a valuable policy/advocacy role, farmer support and promotes the Australian cotton industry.

MACHINERY: The cost of each farming pass reflects variable costs only (fuel, repairs and maintenance), labour and depreciation are considered overhead costs, so are not included in this budget.

PRICES:

Input Prices

Chemical & fertiliser pricing information was collected across all cotton growing regions and averaged to give an indication of product pricing.

Cotton seed price per kg will vary with the time of ordering and seed treatments chosen. Price quoted in the budgets is for a preseason order of 746B3F.

Output Prices

Lint $466/bale is the average five-year (2012-2017) published cotton lint price by Namoi Cotton Co-operative, base grade cotton.

Seed The cotton seed price is given indicatively as a per bale value. $75/bale for seed (prior to ginning costs being subtracted) is the equivalent of $300/t, assuming an average of 250kg of cotton seed per bale of lint.

ROTATION: Whilst cotton can be grown in various rotations, this budget assumes a two-year rotation of cotton- wheat- long fallow.

ROW CONFIGURATION: Fully irrigated furrow and overhead is assuming solid plant on 1m beds. Semi-irrigated assumes double skip and dry land considers varied planting configurations. See the image to the right to understand these options.

YIELD: Actual yields are a complex result of agronomic and environmental factors and as a result will vary between paddocks, farms and regions.
**Fully Irrigated:** A yield of 11 bales/ha is achievable considering the long fallow, 'best practice' operations and the five-year average yield for the variety 746B3F in Cotton Seed Distributors (CSD) commercial trial results.

**Semi irrigated:** The yield of 5 bales per ha assumes 200mm plant available water content (PAWC) at planting and applied irrigation water of 4.5ML.

**Dryland:** The yield differentials between the various row configurations are entirely weather and region dependant. We have used the yield matrix (based on Ozcott modelling of the Darling Downs Region) from page 18 of the Australian Cotton Production Manual 2017 in assumptions.

**REFUGE:** Each grower is required to grow a refuge crop as part of preventative insect-resistance management. Refuge requirements have been reduced with the introduction of Bollgard3® cotton, however remain an integrated part of growing the technology to protect its longevity. With this in mind, refuge crop costs have been included as part of the gross margin budget. For the purposes of the irrigated budget examples, we have used irrigated pigeon peas at 2.5% of the Bt cotton area. Unsprayed conventional cotton at 5% of the Bt area is used for the dryland budget. Please refer to the Monsanto’s Resistance Management Plan for more information on refuge crops and minimum requirements.

**REFUGE REMOVAL:** Pigeon peas should only be harvested or slashed after the Bollgard3® crop has been removed.

**Disclaimer**

CottonInfo & Ag Econ accept no responsibility for the accuracy or completeness of any material contained in this publication. Additionally, CottonInfo & Ag Econ disclaim all liability to any person in respect of anything, and of the consequences of anything, done or omitted to be done by any such person in reliance, whether wholly or partly, on any information contained in this publication. Material included in this publication is made available on the understanding that CottonInfo & Ag Econ are not providing professional advice. If you intend to rely on any information provided in this publication, you should obtain your own appropriate professional advice.