Dryland Cotton
Take another look®

Line up more profit with Dryland Cotton.

Row configurations are an important factor in improving your gross margins. By choosing the right row configuration for your operation, you can significantly increase profits and reduce risk for your Dryland Crop.
With that in mind we've drawn together a comparison of gross margins for different row configurations for Dryland Cotton and sorghum.
These gross margins are a guide only and various agronomic factors should be considered. Individual growers will need to calculate their own gross margins using the data relevant to their operation and farming area.

Gross margins for Dryland Cotton

ROW CONFIGURATION	Expected yield (B/ha)	Expected gross margin	Breakeven yield @ $550/bale
Dryland Cotton double skip	2.79	$645.99	1.62
Dryland Cotton super single	2.17	$426.00	1.40
Dryland Cotton single skip	2.79	$584.82	1.73

Sensitivity analysis for Dryland Cotton (Double Skip Bollgard II – Roundup Ready Flex) – GROSS MARGIN

	PRICE ($/Bale) Ginning charges offset by seed							
YIELD (Bales/HA)	$467.50	$495.00	$522.50	$550.00	$577.50	$605.00	$632.50	$660.00
1.1	-205	-175	-145	-115	-85	-56	-26	4
1.7	18	63	108	152	197	242	286	331
2.2	242	301	361	420	480	539	599	658
2.8	465	539	613	688	762	837	911	986
3.3	688	777	866	956	1,045	1,134	1,223	1,313
3.9	911	1,015	1,119	1,223	1,327	1,432	1,536	1,640

Sensitivity analysis for Dryland Cotton (Super single Bollgard II – Roundup Ready Flex) – GROSS MARGIN

	PRICE ($/Bale) Ginning charges offset by seed							
YIELD (Bales/HA)	$467.50	$495.00	$522.50	$550.00	$577.50	$605.00	$632.50	$660.00
1.1	-105	-74	-42	-10	22	54	86	117
1.5	25	65	106	146	187	227	268	308
1.8	155	204	253	302	352	401	450	499
2.2	285	343	401	459	516	574	632	690
2.5	415	482	548	615	681	748	814	881
2.8	551	626	702	777	852	927	1,003	1,078

Data supplied by Rob Holmes, HMAg Pty Ltd.
NB Costs are GST exclusive current as of May 2011. Prices may change throughout any cropping season.

Sensitivity analysis for Dryland Cotton (Single Skip Bollgard II – Roundup Ready Flex) – GROSS MARGIN								
	PRICE ($/Bale) Ginning charges offset by seed							
YIELD (Bales/HA)	$467.50	$495.00	$522.50	$550.00	$577.50	$605.00	$632.50	$660.00
1.1	-266	-236	-206	-176	-147	-177	-87	-57
1.7	-43	2	47	91	136	181	225	270
2.2	180	240	299	359	419	478	538	597
2.8	403	478	552	627	701	776	850	924
3.3	626	716	805	894	984	1,073	1,162	1,252
3.9	849	954	1,058	1,162	1,266	1,370	1,579	1,579

Gross margins for dryland sorghum

ROW CONFIGURATION	Expected yield (T/ha)	Expected gross margin	Breakeven yield @ $195/T
Dryland sorghum double skip	4.03	$408.18	1.94
Dryland sorghum solid	4.03	$398.81	1.98
Dryland sorghum single skip	4.03	$405.00	1.95

Sensitivity analysis for Dryland sorghum (Double Skip) – GROSS MARGIN								
YIELD (T/HA)	$130.65	$152.10	$173.55	$195.00	$216.45	$237.90	$259.35	$280.80
1.0	-223	-211	-181	-160	-139	-118	-97	-76
2.0	-97	-64	-13	29	71	113	155	197
3.0	30	83	156	219	282	345	408	471
4.0	156	231	324	408	492	576	660	744
5.0	283	378	493	598	703	808	913	1,018
6.0	409	526	661	787	913	1,039	1,165	1,291

Sensitivity analysis for Dryland sorghum (Solid) – GROSS MARGIN								
YIELD (T/HA)	$130.65	$152.10	$173.55	$195.00	$216.45	$237.90	$259.35	$280.80
1.0	-232	-202	-181	-160	-139	-118	-97	-76
2.0	-106	-55	-13	29	71	113	155	197
3.0	20	93	156	219	282	345	408	471
4.0	147	240	324	408	492	576	660	744
5.0	273	388	493	598	703	808	913	1,018
6.0	400	535	661	787	913	1,039	1,165	1,291

Sensitivity analysis for Dryland sorghum (Single skip) – GROSS MARGIN								
YIELD (T/HA)	$130.65	$152.10	$173.55	$195.00	$216.45	$237.90	$259.35	$280.80
1.0	-226	-205	-184	-163	-142	-121	-100	-79
2.0	-100	-58	-16	26	68	110	152	194
3.0	27	90	153	216	279	342	405	468
4.0	153	237	321	405	489	573	657	741
5.0	279	384	489	594	699	804	909	1,014
6.0	406	532	658	784	910	1,036	1,162	1,288

Data supplied by Rob Holmes, HMAg Pty Ltd.

NB Costs are GST exclusive current as of May 2011. Prices may change throughout any cropping season.

How do row configurations affect gross margins?

The cotton plant has a vigorous tap root system compared to fibrous root crops, which means the roots explore much wider for moisture and nutrients. This characteristic has led to the use of wide row configurations that increase the total amount of soil moisture available to the plants. This extends the time before in-crop rainfall is required and therefore makes the crop less reliant on in-crop rainfall particularly in the first 2–3 months of its life.

Narrow row configurations are more popular in areas with higher and more reliable rainfall.

There is also a strong relationship between row configuration and fibre quality, especially for fibre length. In row configuration trials, fibre quality improved with wider row configurations. Therefore the row configuration chosen in combination with the seasonal conditions experienced will have an influence on the likelihood of quality discounts being incurred on delivery of the cotton. Gross margin is not just a function of the yield produced, but very much a combination of yield and costs associated with the row configuration chosen.

How does the planting row configuration affect variable costs?

Dryland Cotton has a couple of big-ticket items, which make up the majority of the growing costs, these being picking and technology licence fees.

In wide row configurations, efficiencies in picking can be made through not trafficking every pass, with some contractors charging on a green hectare basis.

The technology licence fee can either be based on a green hectare rate or on an End Point Royalty program where the licence fee paid is related to the yield achieved. This not only works as a risk management tool but also in wider planting row configurations where the green hectare rate and yield potential is lower, it is also a cost management tool because the grower pays less.

Selecting the right row configuration

There are a range of different configurations being used by growers across the cotton industry in semi-irrigated situations. These include single skip, 60 and 80 inch, double skip, super single and some non-uniform configurations. The positive and negative features of each configuration including the relative water use efficiencies depend on the individual situation. What works best in one farming system may not in another due to differences in soil type, environment, cropping history, available equipment, water availability and other factors.

Growers contemplating:
A. whether they would benefit from using skip row configurations, and
B. which skip row configuration they would use
...should consider the following points.

The yield/ cost/ fibre quality mix of each configuration

The combination of reduced fibre length discounts and variable cost savings in growing skip row cotton often lead to a better risk/ return proposition.

The row configuration choices are shown in Figure 1. Growers need to consider their yield potential, based on all the factors discussed below.

Single Skip has the highest upside yield potential of these configurations, averaging 19% decline from solid plant. It will however use its moisture profile the quickest.

It is best suited to situations on heavier soil types with high Plant Available Water Content (PAWC) and more irrigation water availability.

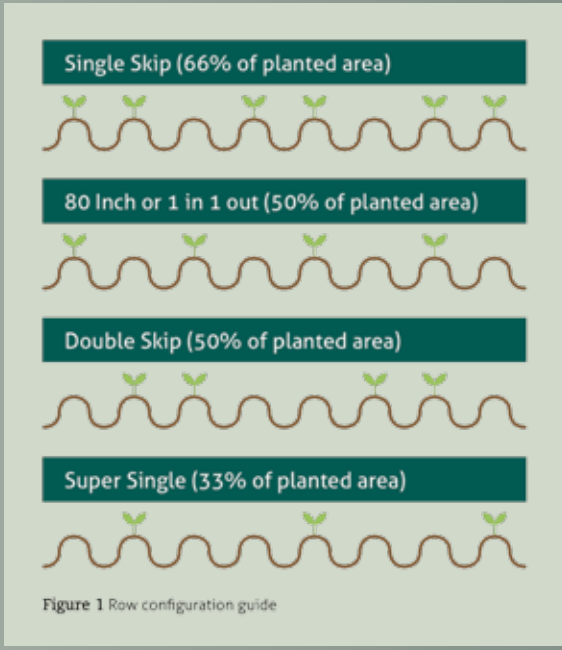

Figure 1 Row configuration guide

One-in-one-out (or 80 inch) cotton has not been included in these comparisons, grower experience and some trial work has shown its yield potential to be slightly higher than double skip but is possibly more prone to fibre quality discounts. A more uniform growth habit in 80 inch cotton can reduce lodging, allow better spray penetration and defoliation processes when compared to double skip.

A couple of advantages perceived by some double skip growers compared to 80 inch are:

- gaps in stand are better compensated for.
- growth management easier due to partial root zone drying.
- double skip is easier for cultivation, especially if the 80 inch row is in the middle of a 2m bed.
- when watering up it is more difficult to sub to the centre of the bed.

Double Skip has an average yield potential about 39% less than solid plant. Plants can be prone to lodging, especially vegetative branches, which take advantage of the extra light available in the skip area. It is best suited to drier profiles and hotter environments.

Super Single (one-in-two-out) has been tried by growers in semi-irrigated situations. The widely spaced plant rows 2 metres apart means the yield potential and potential upside in a good season is severely limited. However, it may be an option with a full soil moisture profile at planting and minimal irrigation water resources. This configuration allows growers to minimise growing costs as well as limit the likelihood of fibre quality discounts.