Twin – Row Triangular Planting of Maize

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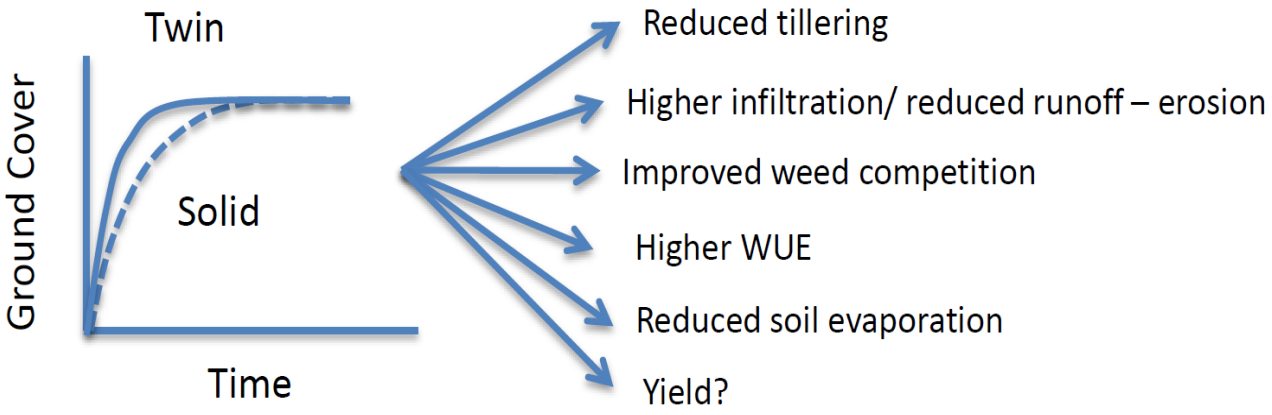
Take Home Message

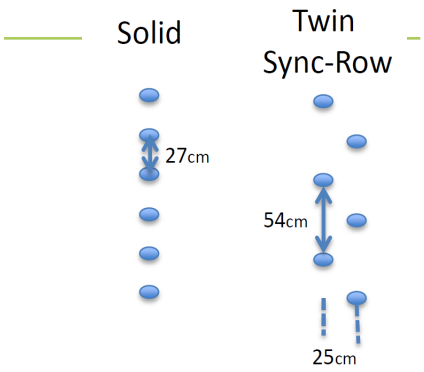
- Initial trial indicates tillering maize varieties were not efficient at producing cobs (low HI)
- Low density twin row planting has shown the potential to modify yield formation in maize and this change can be variety dependant
- Initial studies indicate twin row producing quicker canopy cover solid planting

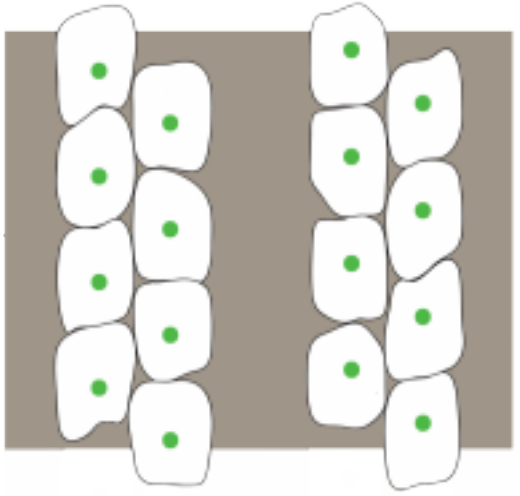
Twin Row Maize – Why?

- In the northern growing region maize is grown at low plant populations (20-30k/ha) to reduce crop water stress early in the growing season
- Commercial hybrids planted at these low densities tend to multi cob but also tiller, increasing water and nutrient usage
- Will a twin row planting configuration alter the way a prolific (multi-cobbing) hybrids produce their yield?
- Can we expect earlier canopy cover resulting in better weed suppression?

Twin row sync-row vs solid







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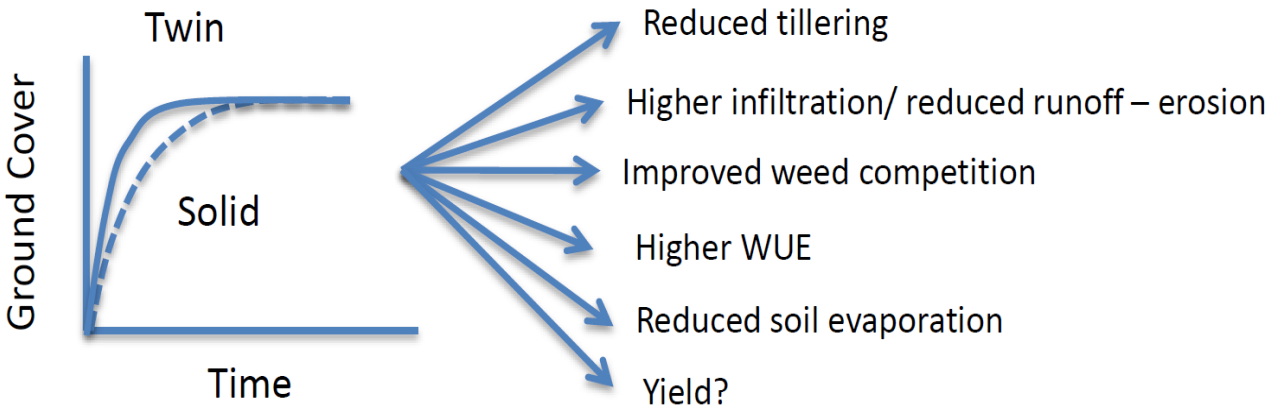
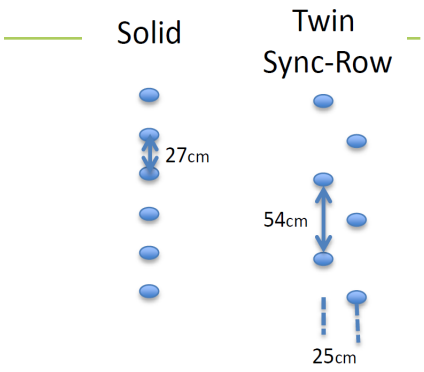


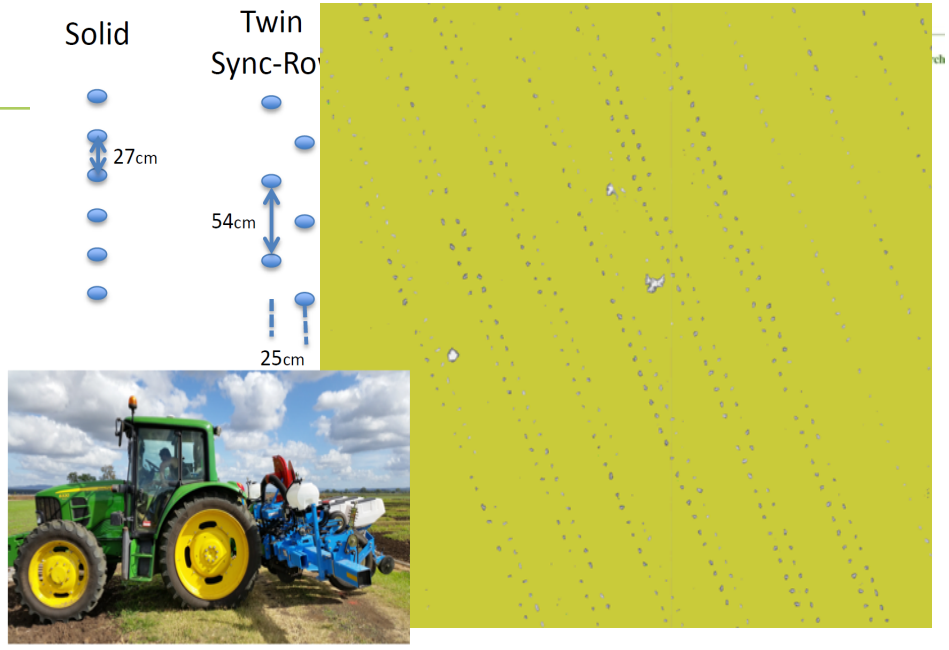


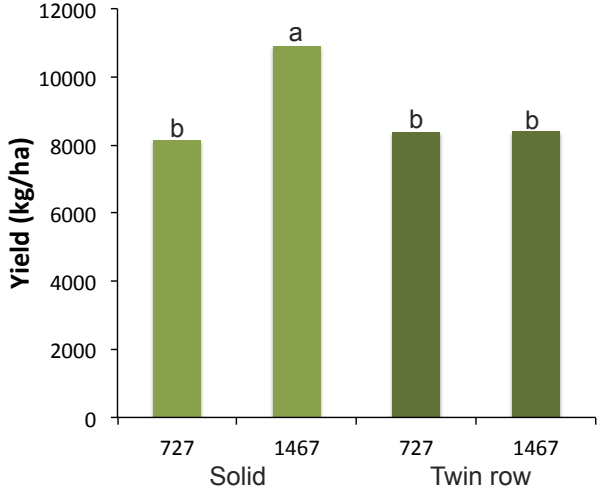
- *"There is a (small at this stage) trend for farmers purchasing precision planting equipment capable of 'singulation' and 'row or swath control'…*
- *What is the benefit of singulation and near-perfect plant establishment over a typical plant stand achieved using an air seeder? …*
- *Farmers that grow both summer and winter crops will need to be confident that investment in additional planting equipment is warranted.*
- *Despite current anecdotal and a limited amount of past research, I think this is still a huge research question." G Spackman (Central Queensland)*

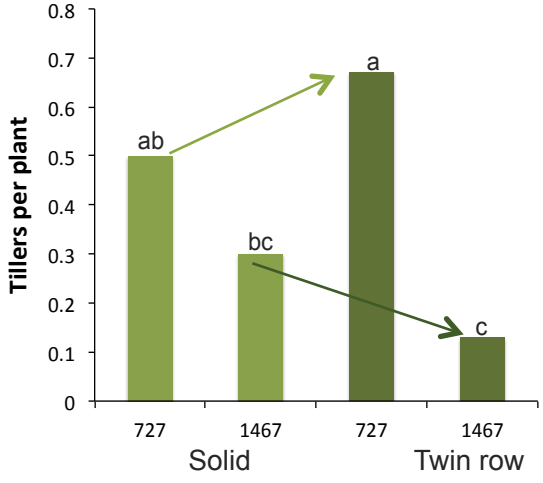
- *The impact on hard to control weed is very important, and the follow on benefits to soil infiltration and soil health needs quantifying. T Philip (PacSeeds)*

Twin row sync-row vs solid

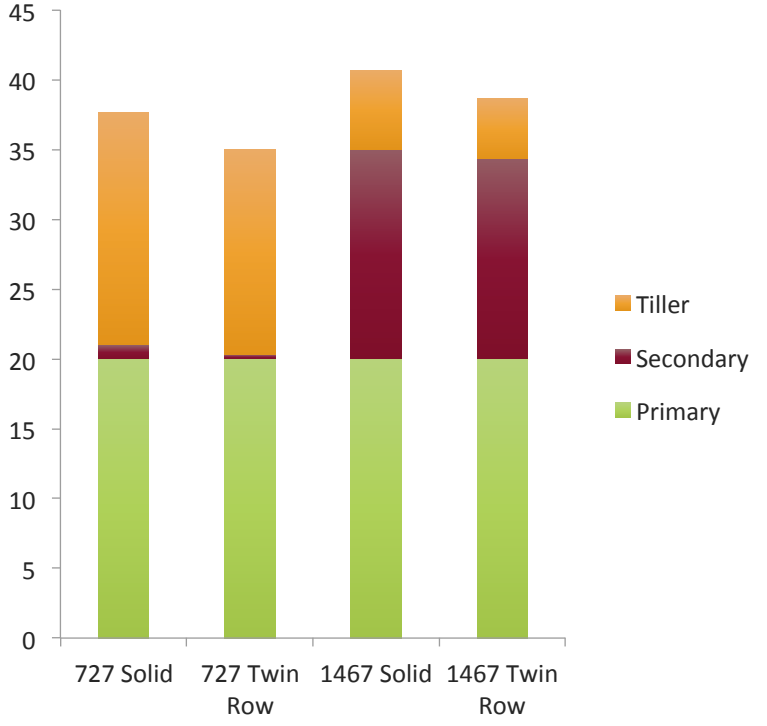
- Site: Gatton RS
- Sowing date: 2nd November
- Two hybrids: Pac727 and P1467
- Two configurations: solid and twin row
- Three replications
- Planter: 6 rows Monosem
- Plant population: 30K pl/ha
- Fertilisation: 220 Kg N/ha



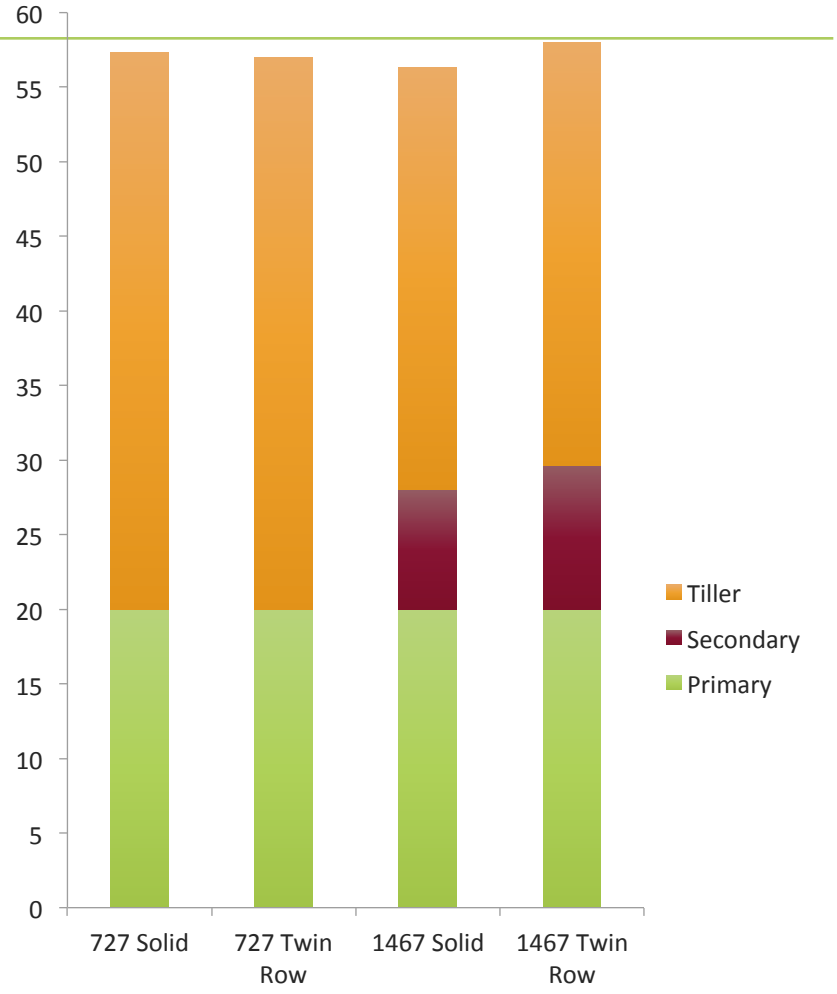




Twin row sync-row vs solid cob production



Planted 2/11/ 2015



Planted 22/10/2016

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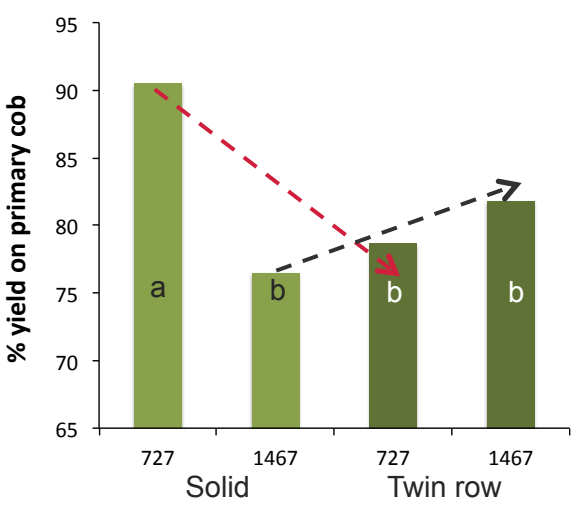
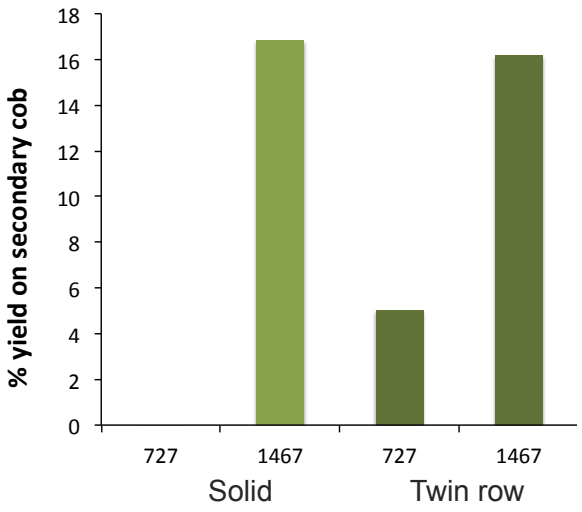
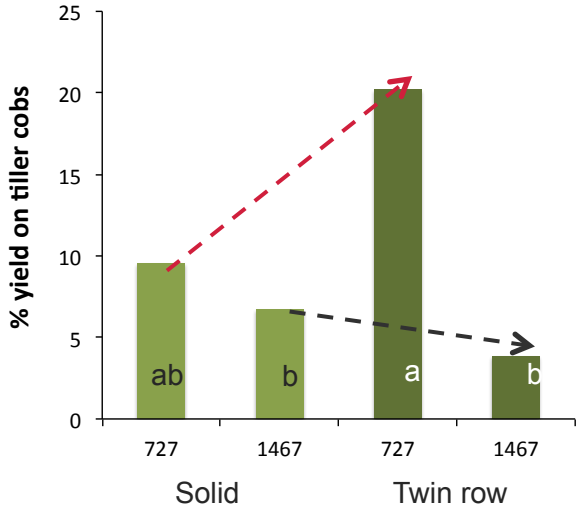
Twin rows & yield formation







- The different hybrids behaved differently in twin rows
- 727 produced more yield on tillers under twin rows, the opposite in 1467
- Current trial to be harvested February 2017 – Yield formation to be determined

Research proceeding this work

- **Obtain yield results from the 2016 planted twin row trial**
- **Comparative analysis between yield and cob location**

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