

Irrigated Wheat

Irrigation management - Water stress during early crop development can reduce tillering, the number of heads/m² & the seeds/head. The most sensitive period for water stress is from 10 to 20 days preceding flowering to the end of the flowering period. Ideally, ensure a full profile is present before flowering, avoiding irrigating through flowering.

In Crop Nutrition - All topdressing operations should be carried out in waterings at 1st or 2nd node (GS31-32), with last ditch N on pre-flower water. Southern experience suggests timing & application rates limited to two topdressings based on shoot/sq. m thresholds and tissue test results. Shoot numbers/sq m >800 will decrease yield & increase lodging incidence. It is understood that most N applications post full head emergence (GS59) may give a slight yield increase, but N efficiency drops below 50%, and protein is increased.

Local research— Irrigated Wheat Planting Date Trial Working with QDPI&F, Mike Brosnan has planted Strzelecki variety wheat in replicated blocks with plantings undertaken mid-month in April, May & June using an 8m Garnel planter. The April planting was pre-watered, while the May & June trials benefited from rain in early June.

Pre-plant fertiliser for the wheat trials was 100kg/ha of sulphate of ammonia, 50kg/ha of superphosphate and 20kg/ha of potash followed by a planting application of 40L/ha of compost tea and 10L/ha of Easy N. From early tillering, Mike monitors crop nutrition using sap testing, through Serve Ag. This practice has allowed him to reduce his N inputs as nitrogen is delivered only when the plant requires it.

Growth Stages of Cereals

Zadoks decimal growth scale is based on ten cereal growth stages. These are: 0 germination; 1 seedling growth (leaves on main stem); 2 tillering; 3 stem elongation (nodes); 4 booting; 5 ear emergence; 6 flowering; 7 milk development; 8 dough development; 9 ripening. Each primary growth stage is then sub-divided into 10 secondary stages extending the scale from 00 to 99.

For example Z, 15, 22, 31 indicates a plant with 5 leaves on the main stem, two tillers and one node on the main stem. For more info got to GRDC www.nvtonline.com.au/LiteratureRetrieve.aspx?ID=10726

Irrigated Soybeans

With the increasing value of soybeans, there have been a number of local inquiries about soybeans as a summer option. Julie Ferguson QDPI&F Pulses & Grain Legumes Industry Development Officer is currently developing a soybean information sheet which should be available by September.

Soybeans are considered a very high risk crop for CQ due to the presence of Silverleaf whitefly (SLW).

SLW sucks sap from the plant and can rapidly generate large populations, which significantly reduces yields. The 'honey dew' secretion from SLW is a food source for sooty mould that covers the leaves with black growth & reduces photosynthesis. There are currently no chemical treatments registered for use against SLW in soybeans in Australia.

Local Experience from Last Season

Peter French, Theodore, grew soybeans for the first time this summer. Following a winter chickpea crop, Peter decided to plant soybeans when irrigation water became available after the close of the cotton window. With rain & some compaction issues, he had to plant a little deeper than optimum, resulting in a 10-11 plants/m density instead of the 30 he was hoping on. This lower plant stand seemed to have an impact on final yield: 1.3t/acre harvested in early April. Peter was otherwise reasonably pleased with the experience. There was excellent nodulation, highlighting the importance of inoculant. As a green manure crop, soybeans can return up to 310 kg/ha of N. Peter is hopeful that there will be a small amount of residual N. SLW & heliothis were not a problem, however he had to apply three sprays for sucking pests.

Trevor Elsdon, Emerald has grown soybeans for seed production for the last two summers. Trevor was aware of the SLW risk, and approached the crop with a plan to plough it for green manure if there was a problem. Fortunately there was no SLW problem. He also had no trouble from heliothis, but had to spray for sucking pests. Planting two varieties, Stuart & Leichhardt, early in the new year, Trevor was pleased with Leichhardt, which yielded over 1.0 tonne/acre, in a particularly trying year.

For more info please contact Julie Ferguson on 07 46932 486 or Pat McKey, from Bettacrop 49877799

Cotton & Grains Irrigation Website

Cotton CRC Cotton & Grains Irrigation Knowledge Management project has launched a new website that includes project summaries, on-farm trial updates and easy to use web-based tools.

www.cottonandgrains.irrigationfutures.org.au

Check out the latest section on tips for growing irrigated wheat. For more info contact Lance.

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