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Frost Planning Workshops Warmly Received

DPIRD Frost Scientist Ben Biddulph, ConsultAG Senior Consultant Garren Knell and experienced grain growers were speakers addressing free-of-charge pre-seeding frost planning workshops held in the grain belt in March.

The collaboration was coordinated by the Mark Holland of the Grower Group Alliance (GGA) and convened by local seven grower groups with investment from the Grains Research and Development Corporation (GRDC).

116 grain growers and consultants attended the seven workshops from Bruce Rock to Esperance and Kojonup. Some workshops were located in non-traditional frost areas to accommodate growers experiencing more intense and frequent frosts extending north, south and west of the traditional frosty regions of the Wheatbelt. As expected, growers in non-traditional areas reported frost increasingly impacting their profits and strongly benefitted from attending.

Growers averaged 8.2 on a 10 point scale for 'improved understanding of opportunities to mitigate the impact of frost on their profits' and 7.9 for 'confidence in their ability to implement strategies to reduce the impact of frost on their profits'.

While there is not a silver bullet, growers can prepare for frost and reduce their risk.

The message to growers was not to avoid sowing crops early but rather to assess the frost risk of different areas of their farms and tailor crop species, variety selection and sowing times accordingly. Other strategies discussed at the workshops include stubble control and nutrition.

Structuring the program to minimise frost risk involves avoiding early sowing of shorter season wheat and barley varieties on your most frost-prone paddocks so crops don't flower during periods with a high probability of multiple events causing cumulative damage. DPIRD's FlowerPower App is an online tool to predict cereal flowering dates (or cutting dates for oats) in your location. Use this information to support decisions on variety choice and the most appropriate sowing date. As with all models, this tool cannot give a 100% guarantee, but growers will be able to make reasonably accurate varietal comparisons (<https://www.agric.wa.gov.au/flowerpower>).

Growers should consider what else they can plant on those areas early, with confidence, to minimise your risk. Alternative early sowing options include hay, oats, canola, pasture or new longer-season winter wheat.

In addition to climate trend data, frost mitigation strategies and the underpinning research, grower speakers Mr Ashton Gray (LIFT), Brent Hyde (Holt Rock Group) and Mr Gary Lang (Facey Group) shared their experiences and strategies at most workshops. Mr Lang demonstrated impressive profit from frost prone areas of his farm in 2016 after implementing

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mitigation strategies. Where an audience was very experienced with frost strategies they were encouraged to share their experiences.

Growers identified frost prone areas of their farms and mapped areas of medium and high risk. They reviewed their 2021 seeding plans and considered applying the mitigation strategies with the experts assisting.

A recent research finding of Dr Biddulph, from work funded by the Council of Grain Grower Organisations (COGGO), is that a type of bacteria found on stubbles and present in rainfall may cause plants to freeze at higher temperatures. This elevated the risk of damage to cereal crops - particularly after rainfall of five millimetres or less in the late afternoon. More work will be proposed on this issue.

Facey Group executive officer Sarah Hyde, ConsultAg agronomist Jordy Medlen and Farm & General agronomist Greg Warren facilitated the workshops.