

KIT 1.2

Minimise the impact of spring radiation frost on grain yield and stability.



Impact

Growers in frost-prone regions manage their farm businesses to minimise the impact of frost on yield and profit.

Summary

- Growers are aware of their options to manage frost.
- Growers understand the risks and economic consequences of frost management decisions.
- The innovation pipeline to tackle the constraint of frost includes digital agriculture, agronomic tools and genetics.

SCOPE

INVESTMENT OUTCOMES

Improved pre-season planning for frost

Growers make optimal decisions on crop choice, placement and sowing in frost-prone cropping regions.



- 1.2.1 Growers have more accurate knowledge of the pattern and severity of frost events across the cropping landscape.
- 1.2.2 Growers and agronomists use knowledge of the frequency and distribution of frost/cold events to guide crop and variety selection, crop placement and planting decisions.
- 1.2.3 The grains industry has access to accurate information about the relationships between the severity and timing of frost events and their impact on yields of major grain crops.
- 1.2.4 Growers have accurate information on the impacts of stubble load and soil management on frost severity.
- 1.2.5 Growers have access to varieties with improved yield in frost-affected cropping regions.
- 1.2.6 Plant breeders have tools to effectively reduce the frost sensitivity of major grain crops.

Informed in-season management decisions

Growers optimize type and timing of crop inputs in frost-prone cropping regions to minimize the impact of frost.



- 1.2.7 The grains industry has improved in-season forecasting tools to better predict frost events and guide risk management decisions.
- 1.2.8 Growers have improved knowledge of the economic value of modifying different in-season management practices to reduce frost-related yield losses.
- 1.2.9 Growers have access to novel and innovative in-season frost protection products.

Effective post-frost responses

Growers make informed decisions regarding extracting value from frosted crops.



- 1.2.10 Growers have access to accurate measurement tools to quantify yield loss following frost.
- 1.2.11 Growers have knowledge of the economic value of different salvage options and management practices which can be applied to frost-affected crops.