



# YIELD SHIELD 2009



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# YIELDSHIELD PRODUCT INFORMATION

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**Y**IELDSHIELD is an innovative new insurance product being introduced by Primacy Underwriting Agency. The policy is designed to assist dryland wheat producers in managing their most critical production risk, Water Stress (insufficient or excessive rainfall) once their crops have reached first jointing.

The product is innovative because it incorporates the use of a sophisticated shire based yield simulation model to determine the percentage level of Water Stress loss. This reduces the costs involved in adjusting potentially thousands of losses 'on-farm' thereby keeping the product affordable.

**YieldShield is a package policy and includes Fire and Hail insurance as these perils can also impact on your crop's yield.**

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## Who is eligible to purchase YieldShield?

YieldShield is available for dryland wheat crops that achieve first jointing. The product is available across most wheat growing shires Australia wide. YieldShield is being marketed on a limited basis in this, its second season, to ensure geographical spread across all growing regions.

## Is Fire and Hail Cover included in YieldShield?

YieldShield includes Fire and Hail insurance which operates similarly to a standard pre-harvest declaration policy. The policy includes a number of standard additional benefits and excess options. As fire and hail insurance is generally well understood by growers the remainder of this brochure outlines the Water Stress cover.

## When does the Water Stress cover attach?

The Water Stress cover will attach when more than 50% of the crop in each identified field achieves first jointing. First jointing normally occurs approx 30 days after planting — depending on your growing region. The insurer will appoint an independent agronomist to inspect the crop and verify that the crop has achieved first jointing. If various fields don't achieve first jointing they will be excluded from the cover.

## How do you have a Water Stress loss?

A Water Stress loss arises when both the following factors are triggered:

- **Modelled Loss** A modelled loss arises when the applicable shire's End of Season (EOS) simulated yield is below the Start of Season (SOS) simulated yield by more than your excess. This calculation is as follows:

$$(SOS - EOS)/SOS > \text{Excess}$$

- **On-farm Loss** An on-farm loss arises when you believe Water Stress has reduced your crops potential yield and an independent agronomist confirms that 'on the balance of probabilities' this is due to the impact of Water Stress.

## Which model is utilised by the YieldShield product?

YieldShield utilises an independent agroclimatic model to generate the simulated yields on a shire basis. The model utilised is the Oz-Wheat model which was designed by the Agricultural Production Systems Research Unit (APSRU). The Oz-Wheat model integrates climate (daily temperature and rainfall) broad soil and crop phenology parameters and crop management practices.

The Queensland Primary Industries and Fisheries (QPIF) is a partner in APSRU who have been responsible for designing a number of yield simulation models including APSIM, Whopper Cropper and Yield Prophet.

## What is the Start of Season (SOS) simulated yield and when is it issued?

You have two options for the Start of Season simulated yields, either 1 June or 1 July.

These will be issued for each shire by APSRU in the first week of June and first week of July.

The SOS takes into account:

- **1 June SOS** all rainfall and climatic data from 1 October last season to 31 May or;
- **1 July SOS** all rainfall and climatic data from 1 October last season to 30 June.

and the forecast weather conditions throughout the vegetative stages of crop growth up to 31 October.

## What is the End of Season (EOS) simulated yield and when is it issued?

The simulated yields for each shire are updated monthly as actual climatic conditions are incorporated in the model. The End of Season simulated yield therefore takes into account all rainfall and climatic data from 1 October last season to 31 October in the current season.

## In the event of a Water Stress Loss what will I be paid?

Once both a modelled loss and on-farm loss have been triggered

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your loss will be calculated as follows:

$$\text{Property Sum Insured} \times (SOS - EOS) / SOS > \text{Excess}$$

### **How do I calculate my Property Sum Insured?**

Your Property Sum Insured is simply the sum of all your field sums insured. Your field sums insured are calculated as follows:

$$\text{Insured Yield} \times \text{Insured Value} \times \text{Area of the field}$$

### **What is my Insured Yield?**

Your Insured Yield is your estimate of what you think you will harvest from your dryland wheat crop in tonnes per hectare.

### **What is my Insured Value?**

You can fix your Insured Value per tonne or you can select the Variable Value Option. The Variable Value Option allows the value per tonne on some or all of your production to be linked to an external commodity price index. The available index's are listed on the application. This Variable Value Option is designed to minimise the financial impact of contract washout where the reduction in yield is due to Water Stress.

### **What excess applies to my Water Stress loss?**

Generally the excesses will be between 15% and 40%. You should remember that Water Stress is a 'catastrophe' type peril and this insurance is designed to safeguard business continuity (rather than manage normal seasonal fluctuations), as a consequence the excess should be relatively high.

### **How will I know if I have incurred a Water Stress loss?**

APSRU will issue monthly updates of the simulated yield for each shire. These will be provided to growers on a monthly basis. Primacy will therefore be able to monitor whether a Modelled Loss has been triggered in each shire. Where a modelled loss is triggered Primacy will appoint an independent agronomist to ascertain whether an on-farm loss has also been triggered.

During the course of the season your crop's potential yield might be reduced due to Water Stress. If you believe this has occurred then you will need to contact AgriRisk. An independent agronomist will be appointed to confirm that 'on the balance of probabilities' this reduction is due to Water Stress.

### **Can I change my Insured Yield?**

You can increase your Insured Yield when the models most recent monthly simulated yield for your shire exceeds the Start of Season simulated yield by 10%. Generally reductions in the Insured Yield will not be accepted as the primary reason for reductions will be due to Water Stress. Hence reducing the Insured Yield will reduce any claim entitlements.

### **What premium rates apply?**

Premium rates including Fire and Hail cover will be between 2% and 10% depending on the yield variability of the shire due to Water Stress and the shires hail history. By reviewing a number of excess options you can tailor the premiums to meet your budget.

### **When will YieldShield be available?**

Premium quotations are available now based on your completed application. If you want to accept a quotation you must do so before the expiry date listed on the quotation. Generally these will be 15 June for the 1 June SOS option and 15 July for the 1 July SOS.

### **How do I determine if YieldShield is appropriate for me?**

In order to have a Water Stress loss YieldShield requires the triggering of both a modelled and on-farm loss. The modelled loss determines the percentage level of loss. Whenever an external model/index is utilised to quantify the loss rather than an on-farm measurement of loss a 'basis risk' is created.

This 'basis risk' is the risk that you incur an on-farm loss but not a modelled loss or a modelled loss but not an on-farm loss. In both cases no claim will be considered.

### **How do I determine my level of basis risk?**

Basis risk is reduced when the historical modelled End of Season yields closely correlate with your crop's historical yields. You should therefore compare the last 5 seasons modelled End of Season yields with your own historical yields.

Your historical yields don't need to be the same as the simulated yields but ideally the variance in each season between your historical yields and the EOS simulated yields should be similar. In other words a strong correlation between the numbers implies a lower basis risk and limits the likelihood that you meet one, but not both, triggers.

### **Who is the Insurer?**

The Insurer is Allianz Australia Insurance Limited. Allianz have a Financial Strength rating of AA-.

### **Any further questions?**

If you have any further questions on this new YieldShield product please contact AgriRisk Services.

Freecall 1800 659 034

Email: [yieldshield@agririsk.com.au](mailto:yieldshield@agririsk.com.au)

For a complete description of the cover please refer to the Policy.

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