**Luise Fanning**

Welcome to the field Crop Diseases Victoria Podcast, brought to you by Agriculture Victoria. We are joined today by Doctor Grant Holloway, a senior plant pathologist with Agriculture Victoria.

Grant has over 30 years’ experience in broadacre field crops pathology research, with a particular focus on cereals. Today, we will be discussing stripe rust and what growers can expect in 2023. So, to set the scene Grant, can you explain the risk of stripe rust this year?

**Grant Hollaway**

Yeah, thanks, that's a great question. Going into the 2023 season the risk from stripe rust is going to be as high or even higher than where we were at the start of the 2022 season. And as we're well aware, last year the pressure from stripe rust was... exceptional.

We hadn't seen a year like that in more than 20 years and we would expect the risk going into this year will be equal to or higher.

And the reason I'm saying that is twofold. One is the amount of inoculum that we had in Eastern Australia at the end of the cropping season last year.

And 2nd is the opportunity for it to carry over from the end of last season into the start of this season.

The thing that we need for rust to survive from one season to the next is living plant material. Ideally volunteer cereals growing over the summer. So stripe rust can only survive on living plant material. It doesn't survive on seed, doesn't survive on stubble, doesn't survive in soil.

So it's when we have wet summers where we have a lot of volunteer cereals growing is when we see the highest risk from stripe rust. So those seasons that follow wet summers is when we see a greater risk from stripe rust. So going into this season, we've had high rainfall right across Eastern Australia which is providing ample soil water and ongoing rainfall in a lot of areas to support the green bridge.

Those volunteer cereals growing which is going to support that carry over of a large amount of rust from last season to be there at the start of this season.

**Luise Fanning**

So is there anything that the growers or industry can do this year to help manage that risk?

**Grant Hollaway**

Yeah, definitely the first thing around managing the risk from stripe rust is to identify that there is a risk and where we're sitting.

At the moment I can say for sure that the risk from stripe rust at the start of this season will be at least as high or even higher than what we saw last year. So knowing that we've got a risk enables growers to put in place strategies to reduce that risk and minimise losses caused by stripe rust. And we know that growers can effectively manage stripe rust because of what we saw last year.

There was a whole range of outcomes out there with different management practises where there were situations where farmers were taken off guard with the high amount of stripe rust out there and then also the complexity of managing rust with the inclement weather conditions that we had.

But equally there were scenarios where people who used a range of strategies were able to minimise and prevent losses due to stripe rust.

**Luise Fanning**

So is there anything in specific that growers should be looking at doing in the next few months?

**Grant Hollaway**

So strategies that farmers need to think about is putting in place a range of strategies.

Looking at variety selection, so the risk of stripe rust is reduced as the level of resistance in the varieties selected improve. So as a first step, really trying to minimise planting and or avoid, if possible, planting highly susceptible varieties. And in preference putting in place more resistant varieties and this is a really good year to do that because we know the risk that we're going into with stripe rust.

The next best strategy that they can do is knowing that we are going to have you know, or it's highly likely that stripe rust will be putting pressure on crops early in the season is to apply a fungicide upfront at planting and this can be either applied on fertiliser or on seed.

So these upfront treatments were shown last year, and have been shown for a very long time, to provide early season control which can show benefits well into the growing season. So later in the season in crops, for example that have been treated with flutriafol on the fertiliser.

When rust was appearing in those crops or in the district, the crops that have been treated with flutriafol had lower levels of rust and the rust progressed much slower. This enabled more time to enable a fungicide to be put out.

And timing of fungicide sprays is really important for the control of stripe rust. We saw a lot of examples of where a spray was delayed for operational reasons, and the losses in those situations were much greater, but where flutriafol was used. It effectively buys time to enable some more operational efficiencies later in the season.

The two control strategies. Yeah upfront in the planning is around variety selection and use of chemical upfront and then being in a position to timely apply fungicides during the growing season.

**Luise Fanning**

So you mentioned variety resistance. Is there somewhere specific that growers should be going to find those resistance ratings? Or where can they go look?

**Grant Hollaway**

Yeah, really important to consult a local cereal disease guide and one that's current. The disease ratings in these guides are updated annually and the Agriculture Victoria cereal disease guide will be released during February, which will show the most current ratings of how varieties are expected to perform against the range of strains of stripe rust that we know occur.

**Luise Fanning**

And have there been any changes in some of those ratings from last year that growers really need to be aware of?

**Grant Hollaway**

No changes of significance going into this season. There's some minor changes as we get better data and also the ratings are there for the new varieties that are now available.

**Luise Fanning**

And were there any other issues that they should be looking out for as well, not just stripe rust heading into this year?

**Grant Hollaway**

Yeah, the same as with the amount of inoculum that we see of stripe rust out there, we know that we finished last year with high levels of particularly septoria, so that will carry over on stubbles. And we would expect that to be an issue this year as well. How important septoria is really depends on the amount of growing season rainfall we get.

So in our medium rainfall zone or the Wimmera in Victoria last year, we saw losses in excess of 30% in the absence of fungicides. And that reflects just how a wetter season it.

In 2021 where we had more of an average rainfall season, those losses in the same varieties were less than 10%, so the impact of septoria is going to really relate to the in-season rainfall.

**Luise Fanning**

So what would be the key messages that you would like people to go away with?

**Grant Hollaway**

I think one is to be quite mindful is that inoculum levels going into 2023 will be exceptionally so. This is the year to make sure you review your disease management plans, look at the variety selection, and what fungicides strategies you have in place.

How the season will have unfold in terms of disease pressure will have a lot to do with how much rainfall we get, but where we sit at the moment, we know that risk is quite high, so there will be great benefits in having a robust disease management plan and enacting it.

**Luise Fanning**

Thank you for that Grant Hollaway.

For more information check out the Field Crop Diseases Victoria website at extensionAUS.com.au/FCDVic And for those wondering where to find the disease guide, it is available on the Agriculture Victoria website.

Thank you for listening, all information is accurate at the time of release. Please contact Agriculture Victoria or your consultant before making changes on farm.