# GRDC VIDEO or PODCAST TRANSCRIPT

**Title: Getting a jump start on managing 2025 disease risks**

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**Intro:** This is a GRDC podcast.

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**Shannon Beattie:** Warm conditions across much of Western Australia, and variable rainfall in 2024 contributed to mixed levels of fungal disease severity in the state's cereal pulse and oilseed crops. Hi, I'm Shannon Beattie. With this in mind, Department of Primary Industries and Regional Development plant pathologist Geoff Thomas is urging growers to start thinking about their integrated disease management strategies for the 2025 season as soon as possible, minimizing disease carry over between seasons, being selective about the crop varieties you grow and using seed treatments are just a few of the factors that can help with the overall health of your crops this season. Geoff joins me now and starts with a recap of rainfall throughout 2024.

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**Geoff Thomas:** We had quite a warm start to the season, which impacted on development of some diseases and then quite a wet middle of the winter, which meant that some diseases like sclerotinia and things like that really got going and saw a number of other diseases like powdery mildew and some of our leaf blotching diseases getting going and then a bit of a dry spell at the end of winter meant that some diseases died off a bit. But generally speaking, for most diseases it was a fairly reasonable year, but there were some standout diseases that were at higher levels than expected, like smuts and bunts in cereals and sclerotinia in the northern half of the wheat belt, particularly.

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**Shannon Beattie:** Can we talk about those diseases that were, I guess, a bit more severe than we maybe thought they would be? Those smuts that have been prevalent in barley? Why is that the case? Is that because of winter rainfall?

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**Geoff Thomas:** When we talk about smuts and bunts, we have to be a little bit careful about the different diseases that we're talking about. If we talk about loose smut in barley, which is what you're referencing there, it is a disease which is actually internally carried, so the seed that you sow has the disease in it. Effectively, the seed that was sown carries the infection and that transmits into the emerging plant. And so it's probably less impacted by rain and things and more so by just the growing conditions during the year, but mostly by the level that you bring into the paddock in your seed from the previous year. And one of the other aspects that we think has contributed to maybe poorer than expected fungicide management is with that slightly variable moisture at seeding some of the efficacy of fungicide may have been limited just by uptake and by movement of the fungicide into the root zone and into the seed. But if we talk about the other smut disease or bunt disease that we saw a lot of was flagged smut in wheat, a different disease, not internally seed borne it is a soil and externally seed borne disease. So, it's present in the paddock already and so again, the warmth at the start of the year favours that infection and so paddocks that have had wheat in the last four or five years that had flag smut in them will have had inoculum and has expressed extremely highly, particularly in some of our lower rainfall environments.

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**Shannon Beattie:** Let's talk about a couple of the other diseases you mentioned sclerotinia in canola. Were there any other canola diseases or I guess even some pulse or lupin diseases?

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**Geoff Thomas:** Yeah. So certainly, a disease that's been increasing in prevalence is sclerotinia generally, but we've seen a fairly significant uptick in sclerotinia in lupin crops over the last few years in the north part of the Kwinana zone and into the Geraldton zone. It was quite a lot of sclerotinia in lupin crops and both the canopy infection, which is the more normal infection up in the top of the plant, but also basal infection so sclerotinia basically attacking the base of the plant, and that was particularly prevalent in lupin crops.

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**Shannon Beattie:** Before we move into managing disease in the 2025 season, are there any other diseases that we should talk about from 2024? Any scalds, any mildews, any spots?

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**Geoff Thomas:** There are and for many diseases in 2024 season, we saw that diseases like net blotches in barley and yellow spot and septoria nodorum in wheat were present and are always present because of the amount of stubble that we have. Sometimes we see a bit of a shift depending on maybe a change in virulence of the fungus and so you mentioned a couple and one was barley scald and certainly that's been a disease that over the last couple of years we've had concern with and was in 2024 seen more frequently, both in varieties that are known to be susceptible, particularly on the south coast, there were some crops that were significantly affected but the other thing that we have seen is that an emergence of a pathotype or a virulence for varieties like spartacus and to a degree, maximus, which has become somewhat more prevalent in the '24 season, and certainly in some deeper trials that we had with those varieties, saw significant infection, which was actually causing yield loss. So that is something to keep an eye out, is scald across a number of varieties. Obviously, disease like net form net blotch has been prevalent over the last few years but again, particularly planet and planet related varieties seem to be susceptible now across the wheat belt so that seems to be the dominant pathotype present in our wheat belt. And then diseases like wheat powdery mildew, for example, are always an issue because about 85 per cent of our varieties suite or variety area is in the sort of moderately susceptible or worse range and so that's going to be a continuous disease for us until our variety spectrum changes and so that's something that we need to be aware of on an annual basis, and certainly something that is constantly in the back of our mind.

00:06:05:16 - 00:06:14:00

**Shannon Beattie:** Let's turn our heads to 2025. How do we reduce disease severity going into the next season?

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**Geoff Thomas:** We're always talking about integrated disease management, obviously, and so going into next year, things to be aware of is the diseases of concern and how they're carried over. Obviously, the basis of any integrated disease management is your variety choice, either choosing a variety that is better for the disease that you're concerned about. There are options for most diseases, so choosing a variety is important if you're particularly worried about a disease. The other aspect, of course, is to try and reduce the inoculum load. So that's things like if you're worried about a particular disease this year you knew the paddock had high levels of scald, let's say, which is a stubble borne disease, then rotate away from barley in that paddock. So rotation is a key driver for all of those stubble borne diseases and that's where we're talking about scald in barley, net blotch in barley, yellow spot and septoria in wheat, canola blackleg - all of those diseases are stubble borne so rotation away from and reducing things like green bridge carryover for diseases like powdery mildew in wheat are effective. If you can delay the onset of disease then you're reducing the potential impact and I guess then we come to things like fungicide strategies and in terms of preparing for next year, for some diseases, things like seed dressings become important and certainly those smut and bunt diseases we were talking about are a target specifically for those seeding fungicides.

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**Shannon Beattie:** How far in advance should growers be planning their disease management for 2025? When do they actually need to start doing that and you know if we're looking at this being, you know, if they've had their summer holidays and they're listening to this beginning of 2025, is it too late?

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**Geoff Thomas:** Yes and no. Most growers are thinking about this sort of stuff as they're harvesting, obviously, because they're collecting the seed that they want for next year and so that's the first part of it is what seed are they collecting, what's the weaknesses of that variety that they're choosing and then knowing whether they need to apply seed dressing or whether that's the one that they plant in their continuous barley paddock or not, depending on its susceptibilities. And then paddock planning time is obviously about rotation and understanding what the carryover risk is, did that paddock have wheat last year or the year before, is something like flag smut a risk? Is there still remnant stubble in there for net blotches in barley? And then obviously do you choose to put seed dressing on to a seed lot can that happen immediately prior to seeding. Do I need an in-furrow fungicide? Those things, so yeah, it's a continuous process I think of making those adjustments and of course the other one is, as I say, if there's beautiful heavy rain in February and you've got wheat regrowth all over the place, then managing that to reduce any green bridge carry over risk.

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**Shannon Beattie:** How important is that integrated disease management package Geoff? We've obviously mentioned like a few different possible ways of controlling these diseases in the 2025 season but how important is it to not just rely on one of them and have that integrated package and a bunch of different options at play?

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**Geoff Thomas:** It's vital for a couple of reasons. One is we have over the last while we've been very dependent on the use of fungicides, and we know that there is emergence of fungicide resistance in a number of different diseases in WA and so the importance is that every brick in the wall helps basically and so it starts with your variety and then reducing the amount of disease that's present - all of those things mean that if you don't have to spray a fungicide because your variety is really good and there's no disease around, then you've immediately saved money and hassle. So it is essential that all of those aspects are considered both in terms of reducing the risk, reducing the reliance on fungicide, and maintaining the sustainability of those fungicides for when you need them.

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**Shannon Beattie:** Can you point us in the direction, Geoff of some good tools or resources for growers who are maybe wondering what varieties they should be planting, or other options within this, and where they can go to find that info?

00:10:15:10 - 00:11:25:23

**Intro:** The best reference book that I read every year is the annual Crop Variety Sowing Guide that DPIRD produces and the 2025 Crop Varieties Sowing Guide is available now, both as a hardcopy or online through DPIRD website. That tells you all the aspects of your variety disease resistances, but quality aspects, everything to do with the varieties. That certainly is and that's across cereals, pulses, oil seeds, so that is without doubt the most valuable reference book that I have in my library every year. There are other tools obviously, there are decision support systems that are available through DPIRD, things like the Canola Blackleg CM, which will help with making decisions at the start of the year about managing your canola. The barley net blotch BM again helps with understanding the potential returns on investment from making various decisions. So those sort of tools are available as well. And then generally speaking, through both DPIRD and GRDC, there are a number of factsheets and information notes that are available that detailed both diseases and management.

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**Shannon Beattie:** Geoff, is there anything else that our growers should know as they head into the 2025 season when it comes to disease management?

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**Geoff Thomas:** I think we've covered most everything. I think disease is often not the first decision point for growers. Obviously, yield outlook and quality outlook and those sorts of things is high, but I really think it's important to spend some time to just reflect on what happened in the 2024 season, generally in your region, but specifically in your paddock, and either choose to change variety if you're particularly worried about a disease or at the very least, understand the weaknesses of your variety so that you know what might happen in the 2025 season.

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**Shannon Beattie:** Geoff, thank you so much for joining me on the podcast today.

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**Geoff Thomas:** Thanks for the opportunity.

00:12:18:07 - 00:12:36:06

**Shannon Beattie:** That was Geoff Thomas from DPIRD talking about managing disease risk in the 2025 season. More information on this topic can also be found in the description box of this podcast or online at grdc.com.au I'm Shannon Beattie and this has been a GRDC podcast. Thanks for listening.