

**PREDICTA**

DNA Soilborne disease tests

**B**

# Know before you sow

SOUTH  
AUSTRALIAN  
RESEARCH &  
DEVELOPMENT  
INSTITUTE  
**PIRSA**

Cereal root diseases cost grain growers in excess of \$200 million annually in lost production. Much of this loss can be prevented.

Using PREDICTA® B soil tests and advice from your local accredited agronomist, these diseases can be detected and managed before losses occur.

PREDICTA® B is a DNA based soil testing service to assist growers in identifying soil borne diseases that pose a significant risk, before sowing the crop.

Potential high risk paddocks

- Bare patches, uneven growth, whiteheads in previous crop
- Paddocks with unexplained poor yield from the previous year
- Newly purchased or leased land
- Cereals on cereals
- Cereal following grassy pastures
- Durum crops (crown rot)

PREDICTA® B is delivered to growers via accredited agronomists who interpret the results and provide recommendations.

Enquire with your local agronomist for more information or visit [www.pir.sa.gov.au/predictab](http://www.pir.sa.gov.au/predictab)

PREDICTA® B tests for most of the soil borne diseases of cereals and some pulse crops:

- Crown Rot (cereals)
- Rhizoctonia root rot
- Take-all - including oat strain
- *Pratylenchus thornei*
- *Pratylenchus neglectus*
- Cereal Cyst Nematode (CCN)
- Stem nematode
- Blackspot (field peas)

A national GRDC project is working to broaden the range of tests with some of these interim results given in the "Tests under evaluation" section of the report.

Current tests are:

- Yellow leaf spot
- Common root rot
- *Pythium* clade f
- Eyespot
- *Pratylenchus penetrans*
- *Pratylenchus quasitereoides*
- Charcoal rot
- Ascochyta blight of chickpea
- White grain disorder

**PREMIUM**  
FOOD AND WINE FROM OUR  
**CLEAN**  
ENVIRONMENT



## Paddock history

This information is provided with the sample and is critical for interpreting the results in the context of planned crops.

## Disease risk

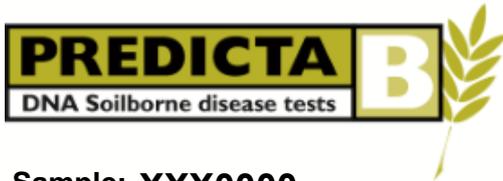
Results are presented as both a value and an associated risk category.

## Pathogen comments

Potential yield loss and management options are presented, according to the result of the sample submitted.

## Tests under evaluation

DNA tests have been developed. Risk categories are currently being defined. In the interim results are reported with population density categories.



**SARDI Plant & Soil Health**  
Gate 2B, Hartley Gr. P 08 8303 9360  
URRBRAE SA 5064 F 08 8303 9393

Sample: **XXX0000**

Report date: **16/11/2017**

Paddock:

Nearest town: **WIDGELLI**

Sampling strategy: **Random**

Grower:

Region: **Southern**

Stubble added: **No**

Paddock history	2 years ago	Last year	This year
Crop / variety	Wheat	Durum	Fallow

TEST	RESULT	DISEASE RISK*			
		Not Detected	Low	Med	High
CCN	<0.05 eggs /g soil	■			
Stem nematode	<0.5 nematodes/100 g soil	■			
Take-all	1.45 log(pg DNA/g soil)			■	
Take-all - Oat Strain	<0.8 log(pg DNA/g soil)	■			
Rhizoctonia	<0.48 log(pg DNA/g soil)	■			
Crown Rot	<0.6 log(pg DNA/g soil)	■			
Pratylenchus neglectus	<0.1 nematodes /g soil	■			
Pratylenchus thornei	18.9 nematodes/g soil			■	
Blackspot	<1.2 log(pg DNA/g soil)	■			
Blackspot (Phoma koolunga)	<1.2 log(pg DNA/g soil)	■			

\*Risk categories should be used as a guide only, may be subject to regional and seasonal differences, and may be revised over time.

## UNDER EVALUATION

TEST	RESULT	POPULATION DENSITY**			
		Not Detected	Low	Med	High
Bipolaris	<0.6 log(pg DNA/g soil)	■			
Pythium clade f	1.69 log(pg DNA/g soil)			■	
Yellow leaf spot	1.88 log(kDNA copies/g soil)			■	
Eyespot	<0.3 log(kDNA copies/g soil)	■			
White Grain Disorder	<0.3 log(kDNA copies/g soil)	■			
Pratylenchus penetrans	<0.1 nematodes /g soil	■			
Pratylenchus quasitereoides	<0.1 nematodes/g soil	■			
Charcoal rot	0.75 log(kDNA copies/g soil)		■		
Phoma rabiei	<0.05 log(kDNA copies/g soil)	■			

\*\*Population densities are based on the distribution of pathogen levels detected in PreDicta samples over several years. These are not disease risk categories.