

## **Don't lose your head to loose smut this season, control it with a seed treatment you can trust**

Broadacre  
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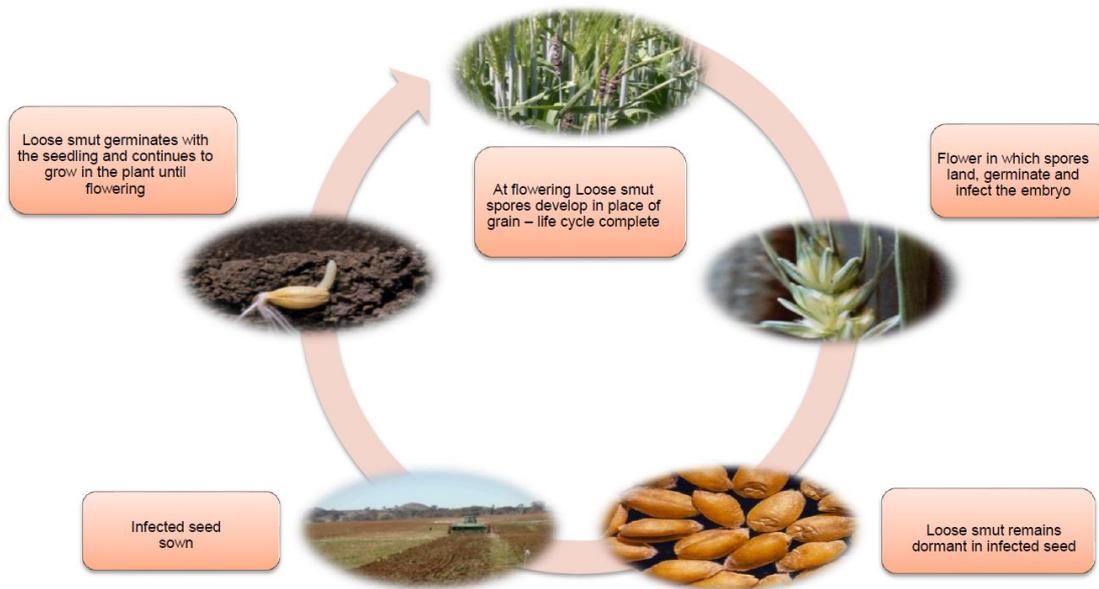


Loose smut continues to be observed in many barley crops and varieties should be treated with the SDHI fungicide VIBRANCE.

### **What is loose smut?**

Loose smut of barley is a seed-borne disease where the fungus originates inside the embryo of the barley seed. The disease spreads to adjacent healthy heads during flowering and remains dormant inside newly infected seeds until the following season.

# Loose smut life cycle - wheat & barley



## Where would you find loose smut?

Loose smut is more common in regions with a cool, moist climate during flowering. Frequent rain showers and high humidity at flowering favour infection hence loose smut levels are higher in seed lines produced in high rainfall areas.

The level of loose smut in barley has increased in recent years. This is largely associated with two factors:

1. Large scale use of Hindmarsh and newer varieties that are more susceptible than older varieties.
2. Favourable environmental conditions at flowering.

## Environments favouring loose smut at flowering



## How is loose smut spread?

Contaminated machinery and soil do not transfer loose smut, it is hidden in seed. Loose smut generally occurs at low or trace levels, but in the absence of seed treatments, it has the potential to increase rapidly.

Infected seed is symptomless. Growers must depend on routine use of seed treatments to manage the disease.

It should be noted that affected heads stand out at flowering and appear to be far more numerous than in reality.

## SARDI's Observations from 2017 and lessons for 2018

*By Hugh Wallwork, Principal Plant Pathologist, SARDI*

Seed treatment tests conducted by SARDI in 2015 have shown that products containing just triadimenol provide only about 50% control of loose smut in Hindmarsh. A similar level of control is expected in Spartacus CL. Effective control is provided by products containing the SDHI fungicides, carboxin, Evergol Prime® and Vibrance although where seed is known to be infected then the higher rates set for rhizoctonia control should be used.

**To read the full observations from SARDI and review the data, click [here](#).**

## Management of Loose Smut

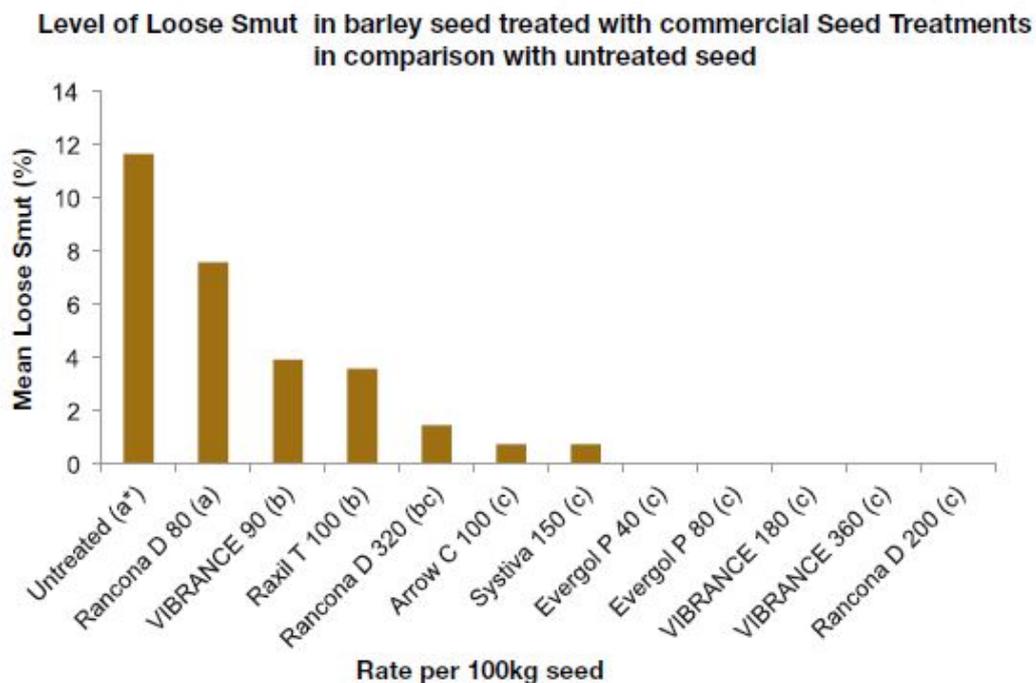
If measures are not undertaken to manage loose smut, growers run the risk of rejection at receival centres.

Barley breeders do not breed for loose smut resistance. The most effective means to control loose smut is using a fungicide seed treatment, which enable growers to keep the disease at low levels (*Figure 1, Hills et al, DAWFA, Wallwork et al, SARDI*).

SDHI fungicides (succinate dehydrogenase inhibitors) will give a very high level of control, but none will give complete control and loose smut may still persist. Varieties should be treated with the SDHI fungicide VIBRANCE®.

The 90 mL/100 kg seed rate of VIBRANCE, or older seed treatments, should be recommended only as a preventative measure when seed lots have no detectable level of infection.

It is critical that all barley seed be treated with a fungicide seed treatment that is registered for loose smut control to minimise its spread.



Source: Wallwork et al data 2015, \* Where treatments have the same letter there was no significant ( $P < 0.05$ ) difference

**Figure 1. Effect of seed treatments on management of Loose Smut in barley, 2015 SARDI, Waite Agricultural Research Institute**

## Application

To improve efficacy seed treatments must be applied evenly and to every seed. Growers should always use high quality seed as a defense measure.

**For further information regarding the management of loose smut, contact your local advisor or alternatively call the Syngenta help line on 1800 067 108.**

## References

- Hills, A., Thomas, G. and Horbury, R. (2014) *Seed dressings to control Loose Smut in Hindmarsh barley DAFWA, Bayer.*
- Loughman, R., Speijers, E.J., Thomas, G.J. and Ballinger, D.J. (1991). *Chemical control of Loose Smut (Ustilago segetum var. tritici) of barley and the effects of cultivar and environment on disease incidence. Aust J. Expt. Agric., 31, 373-378.*
- Wallwork, H. *Cereal Seed Treatments (2018) SARDI.*
- Wallwork, H. and Davidson, J (2014) *Cropwatch (An electronic Newsletter service provided by SARDI) Sept 2014, Volume 11, Number 7.*