

## The SMART approach to avoiding vascular browning in spuds

Potatoes

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**By Scott Mathew, Senior Technical Services Lead**

Containing fibre, potassium, folate, magnesium, copper and zinc, potatoes are a terrific way of gaining essential nutrients. They're good for you and incredibly versatile in the kitchen and when I cut open a spud in preparation for an evening's meal, I expect it to be perfect. Internal defects are always a disappointment and recently I've been noticing vascular browning.

Vascular browning refers to a darkening of the ring of tissue that runs around the tuber just below the skin.

The ring contains the vascular system (phloem and xylem) of the tuber and appears dark in the raw tuber and even darker upon frying. Sometimes the discoloured tissue is all around the tuber and other times it's just a partial ring, usually around the stem end where the tuber was attached to the plant.

Wilts, vine desiccation, rapid vine death, and physiological stress during the season when the tubers are bulking or growing can all cause vascular browning.

As crops go into the desiccation phase, for many growers, it's timely to talk about how to use REGLONE® correctly to significantly reduce the risk of inducing vascular browning.

When the crop is stressed by low soil moisture conditions, vascular browning can occur if any method is used that causes rapid defoliation (e.g. slashing or by chemical methods).

The **SMART** (Soil Moisture Assessment for REGLONE Treatment) test is a very simple and practical field test to assess soil moisture conditions and potential crop stress. It should be used to assess the conditions before REGLONE application.

**You can carry out a SMART test by:**

1. Digging down and taking a soil sample from the centre of the ridge (5 cm below the deepest tuber).
2. Gently squeezing the soil sample into a ball with your hands. If it is sufficiently moist to pass the SMART test it will remain as a ball. If it collapses, then it has failed the SMART test.
3. You should repeat the SMART test at several points across the paddock and pay particular attention to sampling in drier areas.
4. If the soil SMART test is a fail/borderline, delay the REGLONE application until the soil is moistened enough by rainfall or irrigation.
5. If the SMART test is a pass, you can choose the rate of REGLONE dependent on the haulm condition.
6. The recommended REGLONE application is 3 to 4 L/ha and Agral® at the rate of 200 mL/100 L.

REGLONE is a contact/non-translocated herbicide. As such, for best results with crop desiccation it is important to choose nozzles that maximise coverage and penetrate the spray into the crop canopy.

In dry areas, dust stirred up by high winds or equipment can coat the target surface and reduce REGLONE desiccant activity. Avoid applying REGLONE in extremely dusty conditions. A good rain or irrigation can reduce soil moisture stress and also wash any dust off the leaves.

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