

# BILLET PLANTERS, FUNGICIDE DIP TANKS & RATOON STUNTING DISEASE



Ratoon stunting disease (RSD) is a significant issue contributing to productivity and profitability losses to individual growers and the broader industry.

RSD is easily spread within and between farms. Because there are a number of regular farm practices that can spread RSD, its management requires a coordinated approach at a district and individual level. We encourage you to read our other information sheets and publications regarding RSD, especially the Wet Tropics Ratoon Stunting Disease Extension Package, for more information.

This information sheet specifically details information regarding the possible spread of RSD via billet fungicide dip planters, which in some regions has been identified as a significant issue related to disease spread.

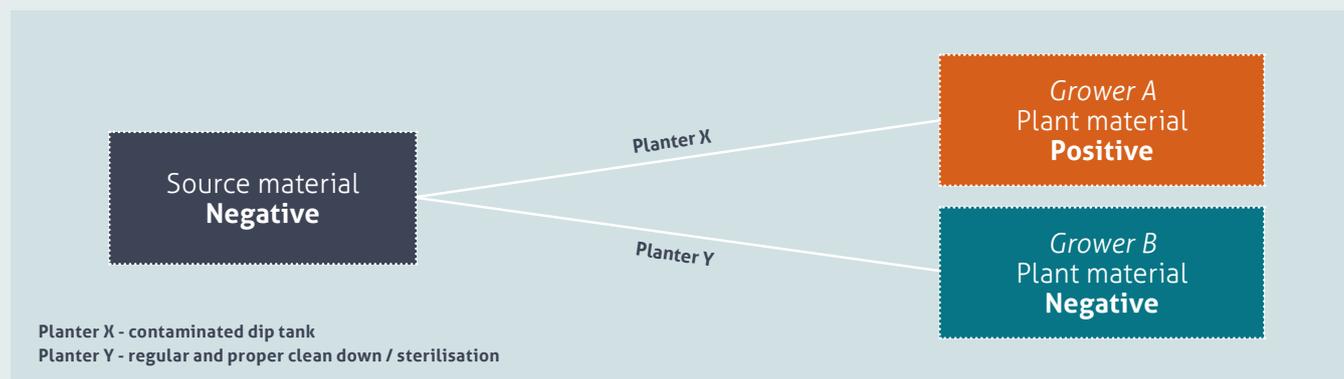
## CLEAN SEED

One of the key management strategies for RSD is to have a well-planned disease-free plant source. As a part of a growers' clean seed plan, fallow management, source of planting material linked with machinery and implement hygiene are vital components to consider. You and your extension officer should talk about this before the planting season.

## BILLET PLANTERS AND FUNGICIDE DIP TANKS

Recent tracking of RSD field spread in a Far Northern Mill area linked billet planters using dip type fungicide application to increased disease incidence. Samples of the fungicide solution were obtained from several planters and sent to the SRA RSD laboratory; the RSD bacterium was detected in the solution suggesting dip tanks are a likely mechanism for RSD transmission. Further experiments are in progress to determine the viability of the RSD causal agent. This finding prompted contact with productivity services companies across the industry to determine if RSD spread in other districts and regions via dip planters was likely to be occurring. The evidence suggests it is highly likely. As billets pass through the contaminated dip, very effective RSD transmission is possible with the infested juice contacting the cut ends of all setts as they pass through the dip. In districts where the disease is prevalent, this could potentially lead to very rapid spread of the disease to many new plantings around the district. RSD appears to be an increasing problem and it will be important to limit dip type planter transmission to prevent even greater yield loss from this most important disease.

## ONE EXAMPLE DEMONSTRATING HOW THIS ISSUE WAS IDENTIFIED.



## WHAT TO DO

There are several important steps to take to address the situation, some of which apply generally to RSD management.

### 1. Disease free planting material:

It is most important to ALWAYS access disease-free planting material. Initial quantities to plant a disease-free plant source can be obtained from approved seed plots of your local productivity services company. Starting with RSD-free material is a trusted foundation for disease management and higher productivity.

### 2. Billet planters with fungicide dips:

The latest research has clearly identified the need to very regularly replace the fungicide solution in dip planters, especially when the disease is present at significant levels in a district or region. The solution should be changed after every block is planted, especially when suspect cane has passed through the system, or at least every few hours. Not only should the dip be replaced, but all surfaces contacting the solution should be washed thoroughly with copious volumes of water and then sterilised with cane knife steriliser (Sterimax or an equivalent containing benzalkonium chloride). It is important that if employing a planting contractor, that the planter arrives clean / sterilised and leaves in the same state. It is imperative that left-over billets from another farm are not planted on your

property; RSD spread via diseased planting material is also an important way the disease is transmitted.

To minimise RSD incidence, all other management strategies for control of RSD should also be followed including sterilisation of all other cutting equipment and planting into fallow ground (with no volunteers). Please contact an Extension Officer if you need further information.

## FURTHER INVESTIGATION

Follow-up research is investigating the viability of the RSD bacterium in fungicide dip solutions. The focus is on attempting to culture the bacterium on agar and also infect setts of a highly-susceptible variety using the fungicide dip solution (containing the bacterium). Both methods are expected to show that the disease is readily transmitted via fungicide dips. Other issues being considered include re-design of the fungicide application system to include application of the fungicide 'to waste' – thus avoiding the use of a dip by using spray application of the fungicide instead. This would avoid direct exposure of the fungicide to the RSD bacterium.

## SYMPTOMS

RSD produces no readily visible external symptoms other than stunting. Diseased fields often have an 'up-and-down'

appearance due to differing levels of stunting in adjacent stools. The only other visible symptoms are red-orange dots or 'commas' in the vascular traces in the nodal tissue (which can be seen when stalks are sliced open with a sharp knife), and a faint pink discoloration of the growing point of young plants. These symptoms are not always present, and some varieties can show similar symptoms when not infected.

## SUMMARY

### What does RSD mean for your farm?

RSD can be the cause of hidden losses to productivity and profitability to your farm and business. The identification of RSD is not easy.

### What are the pathways that RSD could be entering your farm or spreading within your farm?

With a disease that is so hard to see, these are questions worth thinking about.

They are also conversations worth having with your contractor.

It is imperative to keep RSD off your property to maintain high productivity. It is a lot easier to keep it off-farm than to remove the disease once your farm becomes infested. This can be achieved by having a clean seed and hygiene strategy/system in place for your farm and equipment.