

# Sweetpotato Chlorotic Stunt Virus (SPCSV)

## What is Sweetpotato chlorotic stunt virus (SPCSV)?

Sweetpotato chlorotic stunt virus (SPCSV) is a damaging virus of sweetpotato worldwide. SPCSV is spread by whiteflies and occurs in most of the world's sweetpotato production areas. It has recently been detected in Papua New Guinea and Solomon Islands. To date, SPCSV has not been detected in Australian sweetpotato producing areas.



Picture 1 (left) and 2 (right). SPCSV is spread by whiteflies (0.8 to 1.2 mm long)

When SPCSV infects a plant, it causes mild stunting, yellowing of the leaf veins and slight yellowing or purpling of older leaves (Kreuze 2008). The problem is that SPCSV is not often found on its own, but is most commonly found together with other viruses in sweetpotato plants.

One SPCSV strain is unique because it has the ability to interact with these other viruses, such as the commonly occurring, aphid-transmitted Sweetpotato feathery mottle virus (SPFMV). This interaction leads to rapid multiplication of SPFMV virus particles within the infected plant, which is known as a 'synergistic reaction' or 'complex virus disease', resulting in Sweetpotato virus disease (SPVD). Symptoms of SPVD are severe stunting and yellowing, with reduction in yield.



Picture 3: SPCSV in cultivar *Beauregard* in North Carolina. (Be aware that spray damage or mite infections often show similar symptoms). Photo courtesy of Segundo Fuentes, CIP, Peru.

**Should SPCSV gain entry into Australia, it has the potential to dramatically affect sweetpotato crops. Please be on the lookout for possible symptoms of SPCSV or SPVD on your farm.**

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## What about SPVD?

The main symptoms of SPCSV causing SPVD are severe stunting (Picture 4) and yield loss (Picture 5).



**Picture 4:** Stunting, leaf reduction and yellowing (SPVD). Photo courtesy of Segundo Fuentes, CIP, Peru.

Remember similar symptoms of stunting could also be caused by environmental and nutritional effects along with pest damage, other viruses and spray damage.

**Picture 5:** Yield reductions in plants infected with SPCSV and SPVD. Photo courtesy of Segundo Fuentes, CIP, Peru.

**Management of SPCSV and SPVD is best achieved through control of whitefly on your farm and the use of clean, pathogen-tested planting material.**



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