

**CAN WE REDUCE POTATO VIRUS Y INFECTION (PVY) IN POTATOES
USING PRE-PLANTING INSECTICIDES**

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Potato virus Y (PVY), an aphid-transmitted virus, is rapidly becoming the most economically devastating potato virus in the U.S. This virus causes severe yield losses of up to 80% in potato in North America. Additionally, PVY has been evolving into new strains that cause necrotic rings on tubers, reducing the tuber quality and consequently increasing economic losses to potato growers. Seed growers are also affected by PVY infection since the virus can be carried in potato seed resulting in infection of the crop grown from that seed. If a seed potato lot has virus in excess of established tolerances, then all the potato seed from the field represented by that lot are rejected for certification. At present, the most commonly practiced PVY-control strategy, roguing of visually-identified infected plants by hand, is not effective at reducing PVY incidence. One of the reasons for this failure is that the most agronomically preferred cultivars in the U.S. do not display any foliar symptoms while still accumulating high virus titers, thus nullifying the effectiveness of roguing as a management strategy. Chemical insecticide applications against the aphid vectors to reduce PVY transmission is a strategy frequently used by growers. Since the aphid vectors require only a few seconds of probing for the acquisition and transmission of the virus, the strategy seems to be of limited effectiveness. However, newly registered insecticides are supposed to affect the behavior of aphids and may provide some reduction in the transmission and spread of PVY. The research presented indicates that there are some potential insecticides that may help reducing the transmission of PVY.