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Onion flies – a matter of time?

Can you imagine life without the onion? It's a kitchen staple across the country and our fourth largest vegetable crop, but the humble onion is under threat by a pest lurking just outside our borders. It may be a matter of when and not if the Onion fly or Onion maggot [*Delia antiqua*] makes its way into the onion growing regions of southern Australia.

The pest is already widespread in the US, Canada, Europe and Asia and would cause devastation for our 180 million dollar onion industry, affecting farmers mainly across South Australia and Tasmania.

There is a high potential for it to arrive on our shores inside the bulbs of imported plants, and there have already been a number of interceptions inside bulbs of imported garlic.



Steve Rathjen is an onion grower in southern Australia, as well as the outgoing onion industry Chairman and representative for Plant Health Australia, following a four year term.

“The Onion fly is a huge risk to the industry, especially with the volumes of produce that we import now. We have identified a number of high risk pests and diseases, and the Onion fly is one at the top of the list,” said Steve.

“This particular pest can not only come into the country inside onion bulbs, it can also hitch a ride with other plants, and so we rely heavily on AQIS to keep its guard up,” said Steve.

The Onion fly maggot attacks young onion, leek, garlic and shallot plants by entering the stem of the plant to feed on the bulb with its hooked mouth parts. If left unchecked, the maggots will lead to an unmarketable crop – infected bulbs will either be hollowed out, or will rot in storage. This pest is of high risk to the temperate growing regions and prefers cool, wet weather for development.

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“The maggots don’t stop at killing the young plants, they can introduce and spread other damaging diseases and fungal and bacterial pathogens, causing plants to rot,” said Steve.

“We are conscious of the impact of pest incursions and so the industry is in the process of trying to introduce a grower levy to contribute to emergency responses and Plant Health Australia membership. This is like an insurance policy for the whole industry. If a pest incursion happens, the levy will kick in and we will have access to funds and assistance to deal with it,” he added.



He says Australian onion growers are very forward thinking and professional producers, and usually work with an agronomist to constantly monitor the crop for anything unusual. But he urges industry to remain vigilant and always practise good on-farm biosecurity:

- carry out regular surveillance on-farm and educate employees on what to look for
- limit the movement of people on the farm, using your own vehicle to convey visitors – including sales reps and contract labour
- know where bins and machinery have been and clean down vehicles and equipment between properties
- onion plants and propagation material should not be distributed without screening for pests and diseases
- report anything unusual in the crop to your agronomist or call the Exotic Plant Pest Hotline on 1800 084 881.

Early detection of an incursion can significantly increase the chances of an eradication campaign for any pest, and the onion fly is no different.

Greg Baker, quarantine entomologist with the South Australian Research and Development Institute (SARDI), agrees that early detection is the key to control.

“In the absence of any kind of on-farm surveillance, there is a real risk that an incursion could become so established and widespread that effective eradication would not be possible,” said Greg.

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“AQIS can do its work at the border, but the role of the producer is to monitor crops and report anything unusual as early as possible. The onion fly would have a good capacity to become quickly established in the irrigated cropping systems of southern Australia,” said Greg.

If you see anything unusual on your property, call the Exotic Plant Pest Hotline on 1800 084 881.

Photo caption – Bulb infected by onion maggots (photograph by Jack Kelly Clark, courtesy University of California Statewide IPM Program).