TWO-SPOTTED MITE TAKING ON ANNUAL CROPS AND PERMANENT PLANTINGS

Kieran O'Keeffe
Regional Extension Officer, Southern NSW, CottonInfo

Paul Grundy
Principal Research Scientist, Queensland Department of Primary Industries, Toowoomba

PHOTO: In hot dry conditions, 2-spotted mite can be a problem in horticultural and broadacre crops. CREDIT: Hayden Petty, SummitAg

QUICK TAKE

- **Two-spotted mite is an increasing problem in broadacre crops and horticultural plantings in the Riverina.**
- **Outbreaks are most likely to occur in hot and dry conditions, generally September–October in horticultural crops and December–January in broadacre crops.**
- **The short lifecycle combined with high reproductive capacity enable 2-spotted mites to quickly develop resistance to miticides, and effective control products are now limited.**
- **Many mite species affect crops, so correct identification is needed before control options are actioned.**
- **The cotton, maize and almond industries all take an IPM approach to manage 2-spotted mite, including avoiding early season sprays that will reduce natural predator populations.**

Two-spotted mite (*Tetranychus urticae*) is a widespread pest found worldwide and throughout Australia. It has a very wide host range – from weeds to ornamental plants.

WITH a very strong El Niño established and predictions of dry weather into summer, the conditions for 2-spotted mite in New South Wales are potentially favourable.

In NSW, 2-spotted mite can be found in broadacre summer crops, including cotton, maize, soybeans and tomatoes, and in horticultural crops, including almonds and pome and stone fruit. The southern irrigation area provides an ample range of the pest's preferred hosts. Outbreaks can be more frequent during hot and dry conditions. Generally, outbreaks occur September–October in horticultural crops and December–January in broadacre crops. Populations can also build up rapidly after broad-spectrum insecticides are applied, which reduce beneficial predators in the crop.

Mite damage initially presents as light-coloured stippling of the leaves, which untreated can lead to leaf reddening and senescence. The mites generally feed on the underside of leaves, piercing the plant cells and sucking out their contents, which causes the stippling. The damage can reduce photosynthetic area of the plant, cause leaf drop or premature defoliation. If severe, this can delay crop maturity. All these symptoms contribute to yield loss of crops and quality reduction of grain or fruit.

Management of 2-spotted mite

The cotton, maize and almond industries all take an integrated pest management (IPM) approach to managing 2-spotted mite.

Two-spotted mite, also known as 2-spotted spider mite, have many natural predators, including thrips, big eye bugs, ladybeetles, lacewings (green and brown) apple dimpling bugs and tangle-web spiders. In most seasons, these beneficial insects will keep 2-spotted mite in check and the use of miticides can be avoided. To protect populations of natural predators, broad-spectrum insecticides should only be used as the last line of defence for insect pests.

There are readily available miticide options available for cotton and almonds. However, mites are quickly developing resistance to these control options, so their use should be considered carefully. Miticide options for maize are available under permit – check with your adviser or reseller for current chemical control options.

Miticide resistance in 2-spotted mite

Two-spotted mites have always been quick to develop resistance to registered miticides. Their short lifecycle combined with high reproductive capacity enable rapid evolutionary shifts in the mites' genetics when products are over-used for management.

The management of resistance can be complicated by the ability of mites to move between crops and properties. This can increase the risk of mites being repeatedly targeted by miticides, enhancing the selection pressure and favouring resistant individuals.

The rapid development of resistance to miticide by 2-spotted mite is an issue for all industries and growers. IPM programs should be the cornerstone of limiting resistance and controlling economically damaging infestations.

Further reading

Two-spotted mite
(NSW Department of Primary Industries)

Two-spotted mite
(Agriculture Victoria)

Two-spotted mite
(AgPest: University of Melbourne and Cesar Australia)

More information

For advice for managing 2-spotted mite on your farm, speak with an agronomist or adviser.

BACK TO CONTENTS PAGE