

UNDERSTANDING CHEMICAL RESISTANCE



Lucilia cuprina, the Australian sheep blowfly, initiates most cases of flystrike on Australian sheep. Like all insect pests, it has the potential to develop resistance to insecticide (chemical) treatments.

Resistance is more likely to occur with long term use or over reliance on just one chemical group.

Resistance doesn't mean that the chemicals have completely lost effectiveness, it just means that the period of protection may be less than what you previously expected or what is on the label.

DO YOU HAVE RESISTANT FLIES?

Before you conclude your flies are resistant, check that:

There was not heavy or persistent rain following treatment, resulting in chemical wash out

The chemical was applied following the label instructions and with the right equipment

These signs indicate you may have resistance:

- a shortening of the protection period that is specified on product labels; or
- flystrike in multiple sheep that have been treated with the same chemical rather than just in a few sheep.

The sheep affected were actually treated

Dags did not make penetration of the chemical difficult

The appropriate amount of chemical was applied using the right application pattern

The wool length was consistent with label instructions

If these factors have been eliminated you should arrange for a resistance test.

RESISTANCE MANAGEMENT STEPS

Sheep producers can follow these resistance management steps to maintain flystrike protection for their flocks and slow the development of resistance within their local fly populations:



1.

Use a range of chemical and non-chemical tools – don't rely on only one tool



2.

Know the chemical groups and rotate them, where practical



3.

Optimise the number and timing of chemical and non-chemical treatments



4.

Follow the label directions and keep treatment records



5.

Regularly monitor for flystrike and kill any maggots from struck sheep

FURTHER RESOURCES

AWI has a range of resources to help you manage flystrike on your property, available at www.wool.com/flystrikeresources.

For more flystrike management information visit the FlyBoss website www.flyboss.com.au.

RESISTANCE TESTING CONTACT

Narelle Sales

Elizabeth Macarthur Agricultural Institute

Email: email.insectresistance@dpi.nsw.gov.au

Direct Ph: 02 4640 6446 **Switch Ph:** 02 4640 6333