



## FACT SHEET

### MOSQUITOES

November 2016

#### The problem

The recent heavy rains and floods have resulted in a large build up of mosquitoes which is causing concern to producers.

There have been reports of blemishes to pork carcasses resulting from the insects biting pigs. Without detailed investigation, it is suspected that mosquitoes are responsible for these blemishes.

Some abattoirs have reported that inspectors require trimming of the affected area of the carcass thereby resulting in a reduced carcass value for producers.

Mosquito bites can also irritate nursing sows resulting in increased overlays.

#### Background information on mosquitoes

The immature stage of a mosquito's life cycle is totally aquatic and the adult is terrestrial. The adult female returns to water to lay each batch of eggs. Mosquito species vary in their breeding habits, biting behaviour, host preferences and flight range. Most mosquitoes will move only a few metres away from their original breeding place, although some species can fly some distance.

The biting activity of most mosquitoes will peak around dusk but some mosquitoes will be active throughout the night and, occasionally, during the day.

- Mosquitoes have the ability to breed in any type of water, and in any type of container.
- Only the female bites, as females require a blood meal for egg development.
- A single female mosquito can lay between two hundred (200) and four hundred (400) eggs within a two to four week cycle.

#### Treatment and control

##### General

There are a number of methods of control that can be implemented to reduce the number of mosquitoes. For example, local councils may use larvicides (pesticides that kill the larvae) which prevent mosquitoes from maturing to adults.

In areas where there is a disease outbreak fogging may be considered as an option in order to kill the infected adult mosquito population.

##### At the farm level

Pyrethrin products pose little risks to mammals compared with other long lasting compounds which have been used in the past. Synthetic pyrethroid based products may be applied to the walls of a piggery, where the adult female mosquitoes may congregate, to kill the insects. However, before using any pyrethroid based products please consult your vet as some are not registered for use in pigs.

Alternatively, netting may be treated with pyrethrins and hung around openings at the piggery killing mosquitoes and other insects which come into contact with the treated netting.

The benefit of using pyrethrin products is that there is no residual impact on the animal. On the downside, repeated treatments will need to be made as pyrethrins are not long lasting.

Other simple measures to limit mosquito build up include removing all containers around the piggery that hold water but are not required for watering the pigs. Knockdown insecticidal sprays or foggers, coils and vapourisers may also be considered for use around the piggery to help in keeping mosquitoes at bay.

## Suggested consultations

If producers wish to follow up on this matter, they may contact the abattoir in the first instance to establish whether there is a problem with mosquito bite welts on their carcasses.

Producer may also contact their local Department of Primary Industry and Local Council to discuss options for action by State and Local Government authorities to deal with mosquito breeding sites, and proposed actions by producers on their piggeries.

## Summary and simple producer actions

To control mosquito populations around the piggery:

- Dispose of all unnecessary containers and other items collecting water, and fill any pot-holes collecting water, in which mosquitoes can breed.
- Develop and implement a vegetation control protocol for the piggery to minimise areas where adult mosquitoes can congregate. The protocol may include: removal of vegetation in close proximity to the piggery; application of herbicide, such as ROUNDUP, where there is green vegetation; and spraying of insecticide such as MALDISON 500 to treated areas.
- Trim branches overhanging roof gutters and clear guttering and downpipes of debris to prevent the pooling of water.
- Screen all opening to tanks, wells or other large water containers with 1 mm mesh.
- Supply workers with effective repellent and protective clothing if working in mosquito prone areas.
- Apply insecticide (eg Solfac Pro)/synthetic pyrethroid to the walls of the piggery to kill adult female mosquitoes. If using products such as Solfac Pro, ensure that the pigs do not have access to the treated piggery walls. Synthetic pyrethroids are not long lasting and will therefore not have a residual impact on pigs.
- Insect repellents may also be applied directly to the pigs via a motorised mister or knapsack for:
  - farrowing sows or pigs that are more than 21 days from slaughter.
  - pigs within 7 days of slaughter use repellents which have a NIL withholding period/ESI. These must be applied daily for the 7 days prior to slaughter. Repellent application is estimated to cost about 10 cents per pig per day.

- Monitor mosquito numbers daily in the pre-sale shed to determine when to start and stop daily spraying with repellents.
- Monitoring may be carried out with a specific mosquito trapper calibrated for recommended spraying.
- Consider the option of hanging netting treated with pyrethrins around openings at the piggery to kill mosquitoes and other insects which come into contact with the treated netting.

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