



Specialising in Integrated Buffalo Fly Control on Cattle

## WHAT IS INSECTICIDE RESISTANCE?

1. Insecticide resistance is the terminology commonly used when a chemical insecticide preparation no longer has high efficacy against a target insect, for which it was originally formulated. Generally the rate and speed of the insect's knockdown and the period of protection that was originally offered, is greatly reduced.
2. Insecticide resistance develops due to a change in the genetic makeup of the target insect population. Some strains of the insect will become more resistant than others.
3. Resistant strains develop when the chemical dose becomes sub-lethal and individual insects survive the chemical application. As succeeding generations are exposed to the insecticide, the number of resistant individuals increases.
4. The major predisposing factors for resistance build-up are the repetitive use of one type of insecticide and the malpractice of under dosing, either in the preparation of the insecticide or in its application to the animal.
5. Buffalo flies have a short generation interval and consequently insecticide resistance can develop rapidly.
6. The new technology controlled release formulations for Buffalo fly control, require careful management. Insecticidal ear tags must be applied to every animal in the mob, and they must be removed at the end of their efficacy period.
7. The most common classes of insecticides are the organophosphates (OP's), synthetic pyrethroids (SP's) and macrocyclics ( ML's }.
8. The level of resistance of a Buffalo fly population can be effectively counteracted by strategic rotation of these chemical classes, as there is little or no cross resistance between the major classes.

**For further information contact Loveland Agri Products**

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