



## Guidelines for producing European eco-label, low or nil residue wool

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There is an increasing focus by producers to minimise or eliminate the use of chemicals to achieve sustainable and more profitable wool production. It is also recognised that the consumer demand for 'eco' products is rapidly increasing and the introduction of tighter environmental guidelines for effluent disposal from wool scouring and processing plants in Europe as well as China could result in increased buyer interest in low and nil pesticide residue wool.

### Eco-labels

In February 1999, the European Union (EU) included textile products as part of its eco-label requirements. The EU eco-label for Textiles enables consumers to recognise garments that are made from clean, low-residue wools and have been processed using clean production methods. This is a voluntary system.

Eco-label wool does not mean nil residue wool and the current limits for pesticide levels can be achieved fairly easily using standard production systems. Eco-label limits are set for organophosphates (e.g. diazinon etc.), synthetic pyrethroids (e.g. Clout S, Vanquish etc.) and insect growth regulators which include diflubenzuron (e.g. Magnum, Strike, Fleececare etc.) and triflumuron (e.g. Zapp, Triffik etc.). The other insect growth regulators cyromazine (e.g. Vetrazin) and dicyclanil (e.g. Clik) are exempt as is spinosad (Extinosad) as they are considered to pose a low environmental risk.

The pesticide limits<sup>∇</sup> for greasy wool are:

Total organophosphates (OP)	less than 2 mg/kg
Total synthetic pyrethroids (SP)	less than 0.5 mg/kg
Total insect growth regulators (IGR)	less than 2 mg/kg

<sup>∇</sup> These limits are likely to become more restrictive, so production systems that aim for reduced chemical inputs are more likely to meet future standards.

The use of synthetic pyrethroids is discouraged due to widespread lice resistance to this group of chemicals and therefore the increased likelihood of treatment failure leading to the need to treat in long wool. The use of organophosphates for fly control is also discouraged. However, organophosphates may be used for a limited time, as a short wool dip for lice treatment.<sup>‡</sup> In May 2007, the Australian Pesticides and Veterinary Medicines

Authority (APVMA) announced a suspension of the registered claim for diazinon to be used as a short wool dip or for long wool jetting for sheep lice. However, existing product that displays the registered label claim can still be used according to label directions but new product will no longer include this claim and must not be used for dipping or jetting.

Testing for pesticide residues can be arranged through major wool brokers to be done by the CSIRO for about \$154 per test covering all the major ectoparasite chemical treatments.

<sup>‡</sup> If diazinon is used as a short wool dip for lice treatment, then the residue level is unlikely to exceed 1 mg/kg.

### Guidelines for producing EU 'eco-label' wool

- No synthetic pyrethroids (e.g. Vanquish) are used for lice control.<sup>#</sup>
- No organophosphates (e.g. diazinon) are used for fly control.<sup>#</sup>
- No diflubenzuron (e.g. Magnum, Fleececare etc.) or triflumuron (e.g. Zapp) etc. to be used.\*
- No restrictions on the use of other chemicals if used according to label directions.

\* Use of these chemicals results in high residues – also evidence of emerging resistance exists.



### Important Disclaimer

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

## Guidelines for producing 'low residue' wool

- No synthetic pyrethroids (e.g. Vanquish) are used for lice control.
- If lice are present, effective treatments are used, i.e. dip with diazinon (only if stated on the label), Extinosad or magnesium fluorosilicate (e.g. Flockmaster II) no later than 2–3 weeks after shearing. Eureka Gold (diazinon) off-shears is another option.
- Advice is sought if lice are found in long wool (i.e. more than 6 weeks after shearing).
- No organophosphates (e.g. diazinon) are used for fly control.
- If jetting for flies is needed, then:
  - for more than 3 months protection, use dicyclanil (e.g. Clik), for 2–3 months protection use cyromazine (e.g. Vetrazin etc.) or ivermectin (e.g. Coopers Blowfly and Lice Jetting Fluid) and for less than 2 months protection use spinosyn (Extinosad);
  - jet only strike-affected mobs, or the most susceptible mobs, e.g. weaners;
  - jet only the most susceptible area on the body, e.g. crutch or jet the breech only, rather than the whole body if the main problem is breech strike.
- Purchased sheep have not been treated or if so, wool is separated at shearing.
- Sheep with fleece disorders (e.g. fleecerot or dermo) are culled.
- Effective worm control with minimal use of drenches based on regular worm egg count monitoring.
- Sheep are managed to minimise their susceptibility to flies, i.e. short wool during spring, strategic crutching, etc.
- Genetic improvement is a priority for minimal scouring, worm and breech strike resistance with breeding stock being purchased from breeders that include such traits in their selection criteria.
- Strikes are treated by shearing the struck area and applying cyromazine (e.g. Vetrazin) or spinosad (e.g. Extinosad) or ivermectin (e.g. Coopers Blowfly and Lice Jetting Fluid).
- Struck animals are identified and culled at the next shearing.
- Wool from individually treated struck sheep is separated at shearing.

## Guidelines for producing 'nil' residue wool

- No routine treatment for lice unless they are confirmed.
- Lice are not present and precautions are taken against introduction, e.g. quarantine protocol for introduced sheep/maintenance of good boundary fences, etc.
- Purchased sheep have not been treated and show no signs of lice.
- No routine jetting for flies and wool from sheep treated for strike is separated and not included in nil-residue lots.
- Sheep with fleece disorders (e.g. fleecerot and dermo) are culled.
- Effective worm control with minimal use of drenches based on regular worm egg count monitoring.
- Sheep are managed to minimise their susceptibility to flies, i.e. short wool during spring, strategic crutching, etc.
- Genetic improvement is a priority for minimal scouring, worm and breech strike resistance with stud stock being purchased from breeders that include such traits in their selection criteria.
- Strikes are treated by shearing the struck area and applying cyromazine (e.g. Vetrazin) or spinosad (e.g. Extinosad) or ivermectin (e.g. Coopers Blowfly and Lice Jetting Fluid) and wool from treated sheep is separated at shearing.
- Struck animals are identified and culled at the next shearing.

## Acknowledgment

Information relating to EU Ecolabel has been obtained in consultation with Dr Ian Russell, CSIRO, Geelong, Victoria.

These guidelines are based on those developed in consultation with Merinotech, a premium wool producer group based at Kojonup.

## Further information

Factsheet 269 Commonly used chemicals to treat sheep lice and blowflies.