



## Guidelines for producing European eco-label and 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 will result in increased buyer interest in low and nil pesticide residue wool. Specific limits have been set for European eco-label residue wool (similar to wool withholding periods). Complying with these limits is not a legal requirement in Australia.

### Eco-labels

In February 1999, the European Union included textile products as part of its eco-label requirements. The European 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. These standards are voluntary.

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. The pesticide limits for greasy wool are:

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

\*IGRs cover diflubenzuron (e.g. *Magnum, Strike, Fleececare* etc.) and triflumuron (e.g. *Zapp*, etc.). Use of either of these chemicals is likely to exceed this level, e.g. expected residues from using triflumuron (e.g. *Zapp* etc.) off-shears is 25–30 mg/kg. Cyromazine (e.g. *Vetrazin*) and dicyclanil (e.g. *Clik*) are exempt, as is spinosad (*Extinosad*) as they pose a very low environmental risk.

The use of synthetic pyrethroids (e.g. *Clout*, etc.) is discouraged for two reasons. Lice resistant to this group of chemicals was reported over 10 years ago. Using these chemicals increases the likelihood of treatment failure leading to the need to treat in long wool. Also, use of some SP chemicals may cause unacceptable residues. Similarly the use of organophosphates for fly control is also discouraged due to fly resistance. However, organophosphates may be used as a short wool dip for lice treatment.<sup>‡</sup> However, farmers should be aware of the current evaluation and debate regarding the future use of this group of chemicals.

Testing for pesticide residues can be arranged through major wool brokers to be done by the CSIRO for about \$70 per test covering all the major ectoparasite chemical treatments.

NB: <sup>‡</sup> If diazinon is used as a short wool dip within 2–3 weeks after shearing for lice treatment, then the residue level is unlikely to exceed 2 mg/kg.

### **Important Disclaimer**

## Guidelines for producing EU eco-label wool

These limits are likely to become more restrictive, so production systems that aim to reduce chemical inputs are likely to meet future standards. For further information, see Farmnote 30/2001 *Sheep lice - Using IPM to avoid chemicals* and Farmnote 46/2001 *Sheep blowflies - Using IPM to avoid chemicals*.

- No synthetic prethroids are used.#
- No organophosphates are used for fly control. #
- No diflubenzuron or triflumuron to be used, as residue levels are likely to exceed limits.
- 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.) and for less than 2 months protection use spinosyn (Extinosad);
  - jet only 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 worm resistance and fly 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. Paramax).
- Struck animals are identified and culled at the next shearing.
- Wool from individually treated struck sheep is separated at shearing.
- If lice are present, use an OP off-shears backliner; OP or magnesium fluorosilicate dip no later than 2–3 weeks after shearing. If an IGR backliner is used, eco-label eligibility will have to be foregone.
- Advice is sought if lice are found in long wool (i.e. more than 6 weeks after shearing).

# Use of these chemical groups is not recommended due to reports of insect resistance.

## Guidelines for 'nil' residue wool

- No routine jetting for flies.
- Lice are not present and precautions are taken against introduction, such as using a quarantine protocol for introduced sheep and maintaining good boundary fences.
- Purchased sheep have not been treated and show no signs of lice.
- 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 worm resistance and fly 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. Paramax) and wool from treated sheep is separated at shearing.
- Struck animals are identified and culled at the next shearing.

## Acknowledgment

These guidelines are based on those developed in 2000 in consultation with Merinotech, a premium wool producer group based at Kojonup. Information relating to EU Ecolabel has been obtained in consultation with Dr Ian Russell, CSIRO, Geelong, Victoria.