



Australian Government  
Australian Pesticides and  
Veterinary Medicines Authority

# Nicarbazin residues in eggs

FAO/WHO/CODEX webinar on Carryover in  
feed



James Deller | 25 March 2021

# Nicarbazin for use in broiler chickens

- Anticoccidial approved for use in broiler chickens
- Administered orally via medicated feed with a mix rate of up to 125 mg nicarbazin/kg of complete feed
- Labels include following restraint

FOR USE ONLY in broiler chickens  
DO NOT USE in birds which are producing or may in the future produce eggs or egg products for human consumption.



# Nicarbazin residues in eggs

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- There was no MRL established for eggs
- Residue monitoring data over the period 2010 – 2016 routinely found residues of nicarbazin (as 4,4'-dinitrocarbanilide (DNC)) above limit of detection
- As no MRL was established, these results were violative



# Trace back investigations

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- Trace back investigations confirmed
  - That the egg producers were not intentionally treating their laying chickens with nicarbazin medicated feed
  - Relevant feed mills did produce nicarbazin medicated feed for broiler chicken producers
  - These mills were complying with the principles of good manufacturing practice and were employing sequencing practices
- Evidence suggested unavoidable carry over in feed

# Was this a known issue?

Literature search identified that carry over of nicarbazin was known to occur overseas



*The EFSA Journal* (2008) 690, 1-34

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**Cross-contamination of non-target feedingstuffs by nicarbazin authorised  
for use as a feed additive<sup>1</sup>**

**Scientific opinion of the Panel on Contaminants in the Food Chain**

**Question N° EFSA-Q-2005-220K**

**Adopted on 9 April 2008**

# Nicarbazin MRL for eggs

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The Australian monitoring data and information the published by the European Food Safety Authority supported the establishment of a nicarbazin MRL for eggs.

It was set at 300 µg/kg following a acceptable dietary exposure assessment



# Summary from this Australian example

1. In some cases, residues of medicinal feed additives can carry over to untreated feeds at levels high enough to cause residues in animal commodities regardless of practicable cleaning and sequencing procedures.
2. Establishment of MRLs in relevant commodities should be considered as an option in these cases, acknowledging:
  - (a) There should not be a public health or trade risk
  - (b) Such MRLs should not condone or support poor manufacturing practice



# Summary from this Australian example

3. Residue monitoring data and trace back information should be used wherever possible to assist in determining if these MRLs are required in practice, and to assist in determining the level of the MRL.
4. The establishment of MRLs should be seen as secondary to good manufacturing practice in managing such residues.





# Thank you



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