



NEW ZEALAND

FOOD

SAFETY

AUTHORITY

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# CROP GROUPING and RESIDUE EXTRAPOLATION

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# MRLs and Food Safety

Pesticide use must result in safe food

- Historically MRLs were mainly food safety standards
- Now food safety assurance is provided more through the pesticide GAP authorisation process and
- MRLs used more for GAP compliance
  - better pesticide regulation and enforcement
  - greater margins of food safety with newer pesticides
  - improved dietary intake risk assessment procedures



# Residue Data Assessment and MRLs

Most national residue assessments include:

- Identification of GAP
  - acceptable control with minimum residues at harvest
- Estimation of all significant residues expected at GAP
  - toxicologically significant residues in raw & processed food
- Assessment of dietary intake risks
- Authorisation of GAP if intake risks acceptable
  - estimated residue intake below ADI & ARfD
- Establishment of suitable MRLs
  - to measure or enforce compliance with GAP



# Minor Crops

- Regulatory requirements the same as for major crops
  - need authorised uses
  - need food safety assurance
  - need MRLs for compliance
- Residue assessment used for major crops is not suitable
  - data generation too expensive
  - technical resources not available
- Extrapolation is an alternative



# Extrapolation & Crop Grouping

- The use of residue data on one commodity to estimate expected residues in one or more similar commodities within a specified group
  - tomato data to eggplants
  - apple & pear data to all pome fruits
- Minimises data generation costs for minor crop uses
  - wider range of pesticides authorised for use
- Permits the setting of group MRLs
  - reduced residue-related trade barriers



# Crop/Commodity Grouping Systems

- Grouping systems exist in many countries
- Used for residue extrapolation & to support Group MRLs
- Differ in detail and structure but common basis
- Within a Group:
  - crops have a similar GAP (authorised uses)
  - expected residues in commodities are similar
  - with sub-groups to suit different residue profiles



# Crop/Commodity Grouping Comparison

	US	EU	Codex	Japan
Representative crops	Listed	Listed	No	No
GAP needed	All crops	All crops	All crops	?
Sub-groups	Yes	Yes	Yes	Yes
Unclassified	Some	'Others'	No	'Others'
Portion analysed	Yes	Yes	Yes	Yes



# Crop/Commodity Group Harmonisation

- Similar for major fruit and vegetables
  - citrus, pome fruits, cucurbits, brassicas
- Some differences in the more diverse groups
  - leafy vegetables, berries & small fruits
- Considerable work needed on misc. fruits
  - edible or inedible peel
  - includes a large number of minor crops
  - increasing volumes in trade
  - most diverse group



## Some Harmonisation Issues to Consider

- What is 'similar GAP'
- What are 'similar expected residues'
- Is GAP (authorised use) needed on all crops in a group to set group MRL
- What crop portion to analyse and to which the MRL applies
- Representative crops for each group
- What information needed to validate a grouping
- What about really unusual commodities



# Conclusions

- Residue extrapolation needed for minor crops
- Crop/commodity grouping is critical for extrapolation
- Group MRLs preferred for GAP compliance and trade facilitation
- Existing classification systems generally similar
- International work on harmonised grouping is ongoing
- Some issues but these can be resolved