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

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<td>GAP needed</td>
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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