Prioritization of compounds for a risk based NPR review of Directive 96/23/EC
Goals of (residue) monitoring

**compliance**
control of compliance to support oversight

**prevalence**
prevalence is required for exposure assessment, trends and for prioritization of substances

**emerging risks**
investigation of emerging risks to get prepared for future risk-based monitoring

29 November 2018
## Monitoring

<table>
<thead>
<tr>
<th>goal of monitoring</th>
<th>substances</th>
<th>sampling</th>
</tr>
</thead>
<tbody>
<tr>
<td>compliance</td>
<td>targeted</td>
<td>targeted</td>
</tr>
<tr>
<td>prevalence</td>
<td>targeted</td>
<td>at random</td>
</tr>
<tr>
<td>emerging risks</td>
<td>non-targeted</td>
<td>at random/targeted</td>
</tr>
</tbody>
</table>

targeted → risk-based

Risk-based
→ what has to be sampled (substance-product, which matrix).
not: where has to be sampled (which part of food production chain, which company)
Risk based monitoring – prioritization of substances

Prioritization of substances
  risk-based: chemical food safety
  (no political, economical or social triggers)

Three decision trees, for
  1. Prohibited substances
  2. Veterinary medicinal products
  3. Contaminants, pesticide residues, natural substances (i.e. mycotoxins)

29 November 2018
## Effective monitoring - risk criteria

### criteria used in decision trees

<table>
<thead>
<tr>
<th></th>
<th>prohibited substances</th>
<th>veterinary medicinal products</th>
<th>contaminants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence of action limit, MRL/ML, limit of detection</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Conform/non-conform results in the last five year</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>(Probability on) use in species</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Scientific information for human risk</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Length of withdrawal period</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Conform/non-conform residues detected in feed</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Transfer of substances to animal products (milk, egg, honey)</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Example of decision tree

Result:
three classes of substances:
high, medium and low priority

Use of decision tree per species and animal product (meat, milk, egg, honey)
Supporting publications

- Risk-based monitoring of chemical substances in food: prioritization by decision trees (scientific paper)
  doi: 10.1016/j.foodcont.2018.06.001

- Revision of the National Residue Control Plan – application on the red meat supply chain. (report)
  https://www.wur.nl/nl/Publicatie-details.htm?publicationId=publication-way-353338393438