How to proceed with laboratories which failed in the ringtest and show no improvement

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Deposition/Soil Solution Ringtest

Requalification is necessary if more than 50% results falls outside tolerable limits.

<table>
<thead>
<tr>
<th>Lab</th>
<th>parameter</th>
<th>WRT 8 2016/2017</th>
<th>WRT 9 2018/2019</th>
<th>WRT 10 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>failed</td>
<td>re-qualified</td>
<td>failed</td>
</tr>
<tr>
<td>A43</td>
<td>NH4-N</td>
<td>x</td>
<td>no attempt</td>
<td>x</td>
</tr>
<tr>
<td>A85</td>
<td>Ca</td>
<td>x</td>
<td>yes</td>
<td>x</td>
</tr>
<tr>
<td>D63</td>
<td>K</td>
<td>x</td>
<td>yes</td>
<td>x</td>
</tr>
<tr>
<td>D63</td>
<td>Mn</td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
Needle/Leaf Interlaboaratory Tests

<table>
<thead>
<tr>
<th>Ring test</th>
<th>N</th>
<th>S</th>
<th>P</th>
<th>Ca</th>
<th>Mg</th>
<th>K</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>17th Test</td>
<td></td>
<td></td>
<td>&lt;&gt;&gt;</td>
<td>&lt;</td>
<td>&lt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18th Test</td>
<td>&lt;</td>
<td></td>
<td>&lt;&lt;&lt;</td>
<td>&lt;&lt;&lt;</td>
<td>&lt;&lt;&lt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19th Test</td>
<td></td>
<td>&gt;</td>
<td>&lt;&lt;&lt;</td>
<td>&gt;&gt;&gt;</td>
<td>&lt;&lt;&lt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20th Test</td>
<td>&lt;</td>
<td>&lt;&gt;</td>
<td>&lt;&lt;&lt;</td>
<td>&lt;&lt;&lt;</td>
<td>&lt;&lt;&lt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21st Test</td>
<td>&lt;&lt;</td>
<td></td>
<td>&gt;&gt;&gt;</td>
<td>&lt;&lt;&lt;</td>
<td>&lt;</td>
<td>&lt;</td>
<td>&lt;</td>
</tr>
</tbody>
</table>

Failed with some parameters and do the re-qualification but failed again in the following test. So the problem in the lab is not found and not fixed!
When a lab did not qualify and did not make efforts to improve the data quality, ICP Forests PCC will send a letter to the National Focal Centre and inform them about the consequence that their data possibly cannot be used for evaluations on an European level.
Validity Period of Ringtests = survey year(s)

**Foliage and Litterfall:** usually **one year** (=year of the vegetation period)
24. European Needle/Leaf Interlaboratory Comparison Test **2021/2022**

**Deposition and Soil Solution:** usually **one year**
11. Atmospheric deposition and soil solution Working Ringtest **2022**
   (test is postponed, so it will be valid for 2021 too)

**Soil:** usually **three years**
10. Test 2021 (**2021-23**)
Qualification per laboratory & parameter

N.Ringtest → passed

N... Survey year (=validity period)
Qualification per laboratory & parameter

1. Letter from PCC to the NFC
2. Monitoring data from the survey year N were marked as wrong
Qualification per laboratory & parameter

1. Letter from PCC to the NFC
2. Monitoring data from the survey year N were marked as possible wrong, if the lab failed in the next test too (or take not part in the next test)
Qualification per laboratory & parameter

Same parameter

N+1.Ringtest → passed

N and N+1 Results ok
1. Letter from PCC to the NFC

2. Monitoring data from the survey year \(N\) were marked as possible wrong, if the lab failed in the next test too.

3. Monitoring data from the survey year \(N+1\) were marked as possible wrong, if the lab failed in the next test too.
Advantages and Disadvantages

• Feedback loop between ringtest providers, PCC, NFCs and concerned laboratories.

• Early information of the NFCs in case of quality problems of their lab(s)

• Greater efforts from the laboratories to get better results

• In case of the soil ringtest – too long validity period / feedback from the next ringtest about the data quality of the last years, 3 years later! Maybe, repeat it more often? Please, discuss this topic in the EP soil.